SMITHSONIAN INSTITUTION

UNITED STATES NATIONAL MUSEUM

REPORT ON THE PROGRESS AND CONDITION OF THE UNITED STATES NATIONAL MUSEUM FOR THE YEAR ENDING JUNE 30, 1917

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UNITED STATES NATIONAL MUSEUM,
UNDER DIRECTION OF THE SMITHSONIAN INSTITUTION,
Washington, D. C., May 10, 1918.

SIR: I have the honor to submit herewith a report upon the present condition of the United States National Museum and upon the work accomplished in its various departments during the fiscal year ending June 30, 1917.

Very respectfully,

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Assistant Secretary, in charge of the National Museum.

Dr. CHARLES D. WALCOTT,
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By Richard Rathbun,
Assistant Secretary of the Smithsonian Institution, in charge of the U. S. National Museum.

INCEPTION AND HISTORY.

The Congress of the United States in the act of August 10, 1846, founding the Smithsonian Institution recognized that an opportunity was afforded, in carrying out the large-minded design of Smithson, to provide for the custody of the museum of the Nation. To this new establishment was therefore intrusted the care of the national collections, a course that time has fully justified.

In the beginning the cost of maintaining the museum side of the Institution's work was wholly paid from the Smithsonian income; then for a time the Government bore a share, and during the past 40 years Congress has voted the entire funds for the expenses of the museum, thus furthering one of the primary means "for the increase and diffusion of knowledge among men" without encroaching upon the resources of the Institution.

The museum idea was inherent in the establishment of the Smithsonian Institution, which in its turn was based upon a 10 years' discussion in Congress and the advice of the most distinguished scientific men, educators, and intellectual leaders of the Nation of 70 years ago. It is interesting to note how broad and comprehensive were the views which actuated our lawmakers in determining the scope of the Museum, a fact especially remarkable when it is recalled that at that date no museum of considerable size existed in the United States, and the museums of England and of the continent of Europe were still to a large extent without a developed plan, although containing many rich collections.

The Congress which passed the act of foundation enumerated as within the scope of the Museum "all objects of art and of foreign

and curious research and all objects of natural history, plants, and geological and mineralogical specimens belonging to the United States," thus stamping the Museum at the very outset as one of the widest range and at the same time as the Museum of the United States. It was also appreciated that additions would be necessary to the collections then in existence, and provision was made for their increase by the exchange of duplicate specimens, by donations, and by other means.

If the wisdom of Congress in so fully providing for a museum in the Smithsonian law challenges attention, the interpretation put upon this law by the Board of Regents within less than six months from the passage of the act can not but command admiration. In the early part of September, 1846, the Regents took steps toward formulating a plan of operations. The report of the committee appointed for this purpose, submitted in December and January following, shows a thorough consideration of the subject in both the spirit and letter of the law. It would seem not out of place to cite here the first pronouncement of the board with reference to the character of the Museum:

"In obedience to the requirements of the charter,[1] which leaves little discretion in regard to the extent of accommodations to be provided, your committee recommend that there be included in the building a museum of liberal size, fitted up to receive the collections destined for the Institution. * * *

"As important as the cabinets of natural history by the charter required to be included in the Museum, your committee regard its ethnological portion, including all collections that may supply items in the physical history of our species, and illustrate the manners, customs, religions, and progressive advance of the various nations of the world; as, for example, collections of skulls, skeletons, portraits, dresses, implements, weapons, idols, antiquities, of the various races of man. * * * In this connexion your committee recommend the passage of resolutions asking the cooperation of certain public functionaries and of the public generally in furtherance of the above objects.

"Your committee are further of opinion that in the Museum, if the funds of the Institution permit, might judiciously be included various series of models illustrating the progress of some of the most useful inventions; such, for example, as the steam engine from its earliest and rudest form to its present most improved state; but this they propose only so far as it may not encroach on ground already covered by the numerous models in the Patent Office.

[1] Since the Institution was not chartered in a legal sense, but established by Congress, the use of the word "charter" in this connection was not correct.

"Specimens of staple materials, of their gradual manufacture, and of the finished product of manufactures and the arts may also, your committee think, be usefully introduced. This would supply opportunity to examine samples of the best manufactured articles our country affords, and to judge her gradual progress in arts and manufactures. * * *

"The gallery of art, your committee think, should include both paintings and sculpture, as well as engravings and architectural designs; and it is desirable to have in connexion with it one or more studios in which young artists might copy without interruption, being admitted under such regulations as the board may prescribe. Your committee also think that, as the collection of paintings and sculpture will probably accumulate slowly, the room destined for a gallery of art might properly and usefully meanwhile be occupied during the sessions of Congress as an exhibition room for the works of artists generally; and the extent and general usefulness of such an exhibit might probably be increased if an arrangement could be effected with the Academy of Design, the Arts Union, the Artists' Fund Society, and other associations of similar character, so as to concentrate at the metropolis for a certain portion of each winter the best results of talent in the fine arts."

The important points in the foregoing report are (1) that it was the opinion of the Regents that a museum was requisite under the law, Congress having left no discretion in the matter; (2) that ethnology and anthropology, though not specially named, were yet as important subjects as natural history; (3) that the history of the progress of useful inventions and the collection of the raw materials and products of the manufactures and arts should also be provided for; (4) for the gallery of art the committee had models in existence, and they proposed, pending the gathering of art collections, which would of necessity be slow, to provide for loan exhibitions by cooperating with art academies and societies.

In the resolutions which were adopted upon the presentation of the report, a museum was mentioned as "one of the principal modes of executing the act and trust."[1] The work was to go forward as the

[1] *Resolved*, That it is the intention of the act of Congress establishing the Institution, and in accordance with the design of Mr. Smithson, as expressed in his will, that one of the principal modes of executing the act and the trust is the accumulation of collections of specimens and objects of natural history and of elegant art, and the gradual formation of a library of valuable works pertaining to all departments of human knowledge, to the end that a copious storehouse of materials of science, literature, and art may be provided which shall excite and diffuse the love of learning among men, and shall assist the original investigations and efforts of those who may devote themselves to the pursuit of any branch of knowledge.

funds permitted, and, as is well known, the maintenance of the Museum and the library was long ago assumed by Congress, the Institution taking upon itself only so much of the necessary responsibility for the administration of these and subsequent additions to its activities as would weld them into a compact whole, which together form a unique and notable agency for the increase and diffusion of knowledge, for the direction of research, for cooperation with departments of the Government and with universities and scientific societies in America, and likewise afford a definite correspondent to all scientific institutions and men abroad who seek interchange of views or knowledge with men of science in the United States.

Since that early day the only material change in the scope of the Government Museum has been the addition of a department of American history, intended to illustrate by an appropriate assemblage of objects the lives of distinguished personages, important events, and the domestic life of the country from the colonial period to the present time.

The development of the Museum has been greatest in those subjects which the conditions of the past three-quarters of a century have made most fruitful—the natural history, geology, ethnology, and archeology of the United States, supplemented by many collections from other countries. The opportunities for acquisition in these directions have been mainly brought about through the activities of the scientific and economic surveys of the Government, many of which are the direct outgrowths of earlier explorations, stimulated or directed by the Smithsonian Institution. The Centennial Exhibition of 1876 afforded the first opportunity for establishing a department of the industrial arts, of which the fullest advantage has been taken, but the department or gallery of the fine arts made little progress, though not from lack of desire or appreciation, until about ten years ago, when circumstances led to its definite recognition.

While it is the primary duty of a museum to preserve the objects confided to its care, as it is that of a library to preserve its books and manuscripts, yet the importance of public collections rests not upon the mere basis of custodianship, nor upon the number of specimens assembled and their money value, but upon the use to which they are put. Judged by this standard, the National Museum may claim to have reached a high state of efficiency. From an educational point of view it is of great value to those persons who are so fortunate as to reside in Washington or who are able to visit the Nation's capital. In its well-designed cases, in which every detail of structure, appointment, and color is considered, a selection of representative objects is placed on view to the public, all being carefully labeled individually and in groups. The child as well as

the adult has been provided for, and the kindergarten pupil and the high-school scholar can be seen here supplementing their class-room games or studies. Under authority from Congress the small colleges and higher grades of schools and academies throughout the land, especially in places where museums do not exist, are also being aided in their educational work by sets of duplicate specimens, selected and labeled to meet the needs of both teachers and pupils.

Nor has the elementary or even the higher education been by any means the sole gainer from the work of the Museum. To advance knowledge, to gradually extend the boundaries of learning, has been one of the great tasks to which the Museum, in consonance with the spirit of the Institution, has set itself from the first. Its staff, though chiefly engaged in the duties incident to the care, classification and labeling of collections in order that they may be accessible to the public and to students, has yet in these operations made important discoveries in every department of the Museum's activities, which have in turn been communicated to other scholars through its numerous publications. But the collections have not been held for the study of the staff nor for the scientific advancement of those belonging to the establishment. Most freely have they been put at the disposal of investigators connected with other institutions, without whose help the record of scientific progress, based upon the material in the Museum, would have been greatly curtailed. When it is possible to so arrange, the investigator comes to Washington; otherwise such collections as he needs are sent to him whether he resides in this country or abroad. In this manner practically every prominent specialist throughout the world interested in the subjects here well represented has had some use of the collections, and thereby the National Museum has come to be recognized as a conspicuous factor in the advancement of knowledge wherever civilization has a foothold.

OPERATIONS OF THE YEAR.

APPROPRIATIONS.

The maintenance and operations of the National Museum for the year covered by this report, namely, from July 1, 1916, to June 30, 1917, inclusive, were provided for by the following items of appropriation in the sundry civil act approved July 1, 1916:

Preservation of collections	$300,000
Furniture and fixtures	25,000
Heating and lighting	46,000
Building repairs	10,000
Purchase of books	2,000
Postage	500
Printing and binding	37,500
Total	421,000

BUILDINGS AND EQUIPMENT.

The more important items of repair in connection with the natural history building were the refastening of 3,500 lineal feet of copper roofing and the remodeling of the skylight over the east wing, the repointing of joints between the pediment stones of the south pavilion, including those of the main cornice and parapet wall, the laying of cork flooring in corridors in the third story, and the construction of a fireproof booth in the auditorium for inclosing the motion picture and stereopticon machines. In the arts and industries building certain old wooden flooring was replaced with terrazzo, and the walls in several halls, laboratories and offices were pointed up and painted. The exterior woodwork of most of the windows, as well as the tin roofs over the ranges and around the rotunda, were also painted. The brick smokestack on the southwest pavilion was repaired, and the entire slate roof, long worn out, was re-covered. Repair work on the Smithsonian building was mainly limited to the laying of certain concrete flooring in the basement, the refurbishing of a few interior walls and the replacing and repainting of small sections of the roofs.

As in previous years, the power plant was shut down for the months of July and August, during which the electric current for lighting and power was purchased from a private company at the rate of 2½ cents per kilowatt hour. The employees connected with this service were given the greater part of their annual leave at this time, and the necessary repairs and changes were also made, but as

the boilers and machinery were in good condition these were only of a minor character. Owing to the shortage of cars and other causes great difficulty was experienced by the contractor in securing supplies of coal, and at times it appeared as though it might become necessary to close the buildings, but, fortunately, this crisis was never reached. The total amount of bituminous coal consumed during the year was 2,881¾ tons and of anthracite coal 136 tons. Steam was turned on October 2 and discontinued May 31.

Many minor changes were made in the heating system of the Smithsonian and arts and industries buildings which greatly improved the service in these and the outlying shops, and for the first time since the installation of the steam meter it has been possible to keep a continuous and correct record of steam used for heating these buildings. The special chain fixtures for the exhibition halls and new globes for the post lights on the galleries in the older building, purchased the previous year, were installed, and before the close of the year 115 new lighting fixtures were obtained to replace the old Benjamin clusters under the galleries.

The expense of electric current has steadily decreased with the increase in the load. The amount of current produced last year was 392,080 kilowatt hours, and the cost, 2.078 cents per kilowatt hour, as compared with 2.221 cents in 1916 and 2.420 cents in 1915. The expense of operating the ice plant was $842.70, $594.81 being for current and the balance for labor and repairs. The output was 327.9 tons, making the average cost $2.57 per ton.

The furniture added during the year included 48 exhibition cases, 197 storage cases and pieces of laboratory furniture, 58 pieces of office and miscellaneous furniture, 1,469 wooden unit specimen drawers, 500 insect drawers and 450 specimen drawers of special kinds. Eighty-four old exhibition cases and pieces of storage and office furniture, and 427 specimen drawers, were condemned as unfit for further use. An inventory of the furniture on hand at the close of the year shows 3,529 exhibition cases, 7,292 storage cases and pieces of laboratory furniture, 3,529 pieces of office and miscellaneous furniture, 44,535 wooden unit specimen drawers, 4,712 metal unit specimen drawers, 9,942 insect drawers and 18,283 miscellaneous specimen drawers and boxes of various kinds. The new furniture was partly obtained on contract and partly made in the Museum shops. Among other work by Museum employees was the remodeling and repair of old furniture, the making of fittings and accessories for cases, of exhibition label frames, etc.

The so-called Armory shed, a part of the frame structure adjoining the building of the Bureau of Fisheries on the Mall, which has for several decades been used by the Museum for the provisional storage of large objects belonging to the collections, was entirely

cleared of its contents early in the year and the shed condemned and removed.

COLLECTIONS.

The total number of accessions received during the year was 1,450, with an aggregate of approximately 195,845 specimens and objects, classified as follows: Subjects comprised in the department of anthropology, 10,775; zoology, 71,761; botany, 79,155; geology and mineralogy, 9,800; paleontology, 23,190; textiles, woods, and other miscellaneous animal and vegetable products, 933; mineral technology, 213; National Gallery of Art, 18. In addition, 186 paintings and other art objects were accepted as loans for exhibition in the Gallery of Art.

Material to the extent of 976 lots, of which over 500 consisted of geological, and 380 of biological, specimens, was received for special examination and report.

DEPARTMENT OF ANTHROPOLOGY.

Ethnology.—Dr. W. L. Abbott, of Philadelphia, supplemented his bounteous gifts of previous years with collections made by Mr. H. C. Raven in Celebes, East Indies, consisting of blowguns, musical instruments, baskets, matting, fish traps, bark cloth garments, domestic utensils, etc., and with a small quantity of material obtained by himself on his recent expedition to Santo Domingo, West Indies. Especially important was a large number of objects exhibiting every phase of the textile art as practiced among the Indians of British Guiana, assembled by Dr. Walter Roth, of Marlborough, British Guiana. This collection, which was purchased and transferred to the Museum by the Smithsonian Institution and is probably unique, contains 477 specimens of basketry, weaving, lashings, knots, headdresses, etc., from natives untouched by extraneous influences. It forms the illustrative basis for a paper by Dr. Roth which is to appear in the Annual Report of the Bureau of American Ethnology. Dr. Roth likewise presented 16 baskets from the same source. Mrs. David DuBose Gaillard, of Elizabeth, N. J., lent to the Museum 44 specimens procured by her husband, the late Col. David DuBose Gaillard, U. S. Army, during his connection with the Mexican Boundary Survey and the Panama Canal, comprising rare Papago Indian baskets and baskets from other tribes, weavings from Panama, etc.

Mrs. Fannie Taylor, of Mora, Wash., presented 89 specimens, principally baskets of fine quality and interesting weaves and designs, together with a rare carved house post, rattles, fishhooks, etc., illustrating the culture of the Quileute Indians of Washington. A carved and painted house post of the Quileute Indians, Beaver Prairie, Clallam County, Wash., contributed by Mr. and Mrs. Theodor F. Rixon,

of Clallam Bay, Wash., is an example of Indian art new to the Museum. A valuable addition, through exchange, from Mr. E. W. Keyser, of Washington, D. C., is a collection of 100 objects, mainly from Eskimo and British Columbian tribes, including articles of ivory, horn, wood, bark, and stone.

Pertaining to the Pueblo Indians of Arizona and New Mexico were a number of small accessions of valuable material, among which may be mentioned 4 Zuñi prayer-sticks collected by the late Frank Hamilton Cushing and presented by Mr. F. W. Hodge; a small black vase from a native shrine in New Mexico, from Mr. Robert Chapman through the Bureau of American Ethnology; a ceremonial bundle of cornmeal pudding wrapped in corn-shuck and used as a gift to children, presented by Mr. Tom Pavatea, of Polacca, Ariz.; a war club of the Tewa Indians of San Ildefonso, N. Mex., collected for the Museum by Mr. Neil M. Judd; an Acoma vase, a gift of Mrs. C. B. Wilcox; a black earthenware bottle from Santo Domingo pueblo, N. Mex., contributed by Mr. E. W. Keyser; a fine turquoise and shell necklace of the Zuñi Indians, formerly belonging to Mrs. Matilda Coxe Stevenson, obtained from Dr. Walter Hough; and Indian corn and digging sticks from the Hopi Indians of Arizona, collected for the Museum by Dr. Hough.

Among interesting examples of American Indian basketry in addition to those above mentioned were an exceptionally fine bottle-neck basket and bowls from the Tulare Indians of California, and a rare hat from the Kern River Indians, California, lent by Mr. Howard W. Bible, of Chevy Chase, D. C.; a fine Tulare basket bowl with quill decoration, lent by Dr. Edwin Kirk, of the Geological Survey, and 2 cane baskets of the Choctaw Indians of Mississippi presented by Dr. Clara Southmayd Ludlow, of Washington. One of the last named, dating from 1849, is unique in having a flaring rim. Other accessions of American Indian work were 22 specimens of costumes, beadwork, etc., from various tribes, the gift of Mrs. E. S. Ovenshine, of Washington; and an Assiniboin headdress of deer hair from Alberta, Canada, presented by Mr. Robert H. Chapman, of Washington.

Of Philippine material, there were two donations, one from Mrs. James C. Courts, of Washington, comprising bolos new to the Museum, hats, etc., forming an important addition; the other from Dr. D. B. Mackie, of Malden, Mass., consisting of a bundle of palmwood splinters for setting in the ground, especially at the fords, to pierce the feet of enemies.

Countries to the south of the United States were represented in the following gifts: Three Haitian wooden drums used in Voodoo ceremonies and of African type, from Capt. R. O. Underwood, U. S. Marine Corps; a bark blanket resembling tapa cloth, made

by the Mosquito Indians of Honduras, from Mr. Robert R. Reynolds, of Ceiba, Honduras; an Indian bow and a tribe stick from Panama, resembling in some respects the Aztec scepter, collected about 1855, from Mr. Fred Avery Cox, of Denver, Colo.; 3 bows with hide quivers full of reed arrows with wooden points, captured from the Yaki Indians, from the University of Arizona through Prof. Byron Cummings; a straw braid hat made by the Chemula Indians of Chiapas, Mexico, from Miss May D. Carter, of Washington; 2 pairs of native shoes of peculiar construction collected at Livingston, Guatemala, from Mr. H. S. Barber, of the Department of Agriculture. Twenty-seven Mexican serapes, displaying excellent weaving and design, were lent by Mr. Herbert J. Browne and Mr. H. W. Van Senden, of Washington.

Of African origin were several Abyssinian specimens, including an ivory charm, a silver filigree bracelet and spears, a silver embossed hide shield, a sword, a crooked knife, etc., lent by Lieut. Col. G. C. Thorpe, U. S. Marine Corps, to whom they were presented by King Menelek; and a pair of shoes from Tunis, the gift of Mrs. Horatio King, of Washington.

Among material from the Far East were a collection of Chinese ceramics and carved teakwood furniture, Japanese swords, pictures, etc., numbering 108 specimens, assembled byMedical Director Charles D. Maxwell, U. S. Navy, and lent by Mrs. Annie H. Eastman, Miss Francina M. Maxwell, and Capt. J. W. Maxwell, U. S. Navy, of Washington; Japanese ceramics, lacquers and metal work obtained by Lieut. (Rear Admiral) Stephen Decatur Trenchard, U. S. Navy, during the diplomatic cruise of the U. S. S. *Powhatan*, 1859–1860, lent by Mr. Edward Trenchard, of Babylon, N. Y.; and 2 ornamented picture frames and a miniature model of a Japanese samurai and attendants, lent by Mrs. Julian-James, of Washington.

The collection illustrating the history of modern arts and industries was augmented by several accessions, notably, a series of candle moulds, flatirons with iron core for heating, etc., from Dr. Paul B. Johnson, of Washington; a camphine lamp of 1830, from Mr. E. W. Keyser, of Washington; an iron lantern with bevel glass sides, from Miss Isabel Rives, of Washington; a miner's iron candlestick from the Queen Copper Mine, Colorado, from Mr. Benjamin Brown, of the National Museum; and a specimen of Wright's expansion bit, exhibited in the evolutionary series of the drill, from the Connecticut Valley Manufacturing Co., of Centerbrook, Conn.

Little research work was undertaken, owing to exacting routine duties, but the curator of the division, Dr. Walter Hough, completed a paper on the Hopi Pueblo collections in the Museum, intended to serve as a handbook to the exhibition series relating to these Indians.

American archeology.—The archeological collections were enriched by a large and important assemblage of antiquities made by Captains John W. Wright and Alexander T. Cooper, U. S. Army, while on military duty in the State of Chihuahua, Mexico, these officers having taken advantage of the opportunity afforded to gather such relics of prehistoric times as were within their reach. Forwarded as a gift to the Museum through Gen. John J. Pershing, this collection includes 597 numbers, comprises nearly every variety of artifact of stone belonging to the ancient town-builders of the region, and is especially valuable for comparison with the cultural remains of the pueblo region on the north and the Aztec provinces on the south.

As in previous years, collections made and transferred by the Bureau of American Ethnology were of much value. Among these were many objects of antiquity obtained by Dr. J. Walter Fewkes in the Mesa Verde National Park, Colo., during an expedition conducted under the joint auspices of the Bureau and the Department of the Interior, and representing for the most part the typical prehistoric culture of the northern border of the pueblo region. Also collected by Dr. Fewkes were earthenware jars, bowls, ladles and cooking pots, a small stone mortar, a grooved ax, and an incised stone from old Zuñi ruins near Gallup, N. Mex. Two small copper bells said to have been found near Copan, Honduras, given to Dr. Fewkes by Mrs. J. H. Harrison, of Dallas, Tex., were presented to the Museum by the former. Kindred collections were secured through the explorations of Dr. Walter Hough in New Mexico, where unique remains in the way of ancient pit-villages were under investigation, the work being carried on under the joint auspices of the Bureau of American Ethnology and the National Museum. A second collection by Dr. Hough comprised stone hammers, arrow-shaft smoothers, rubbing stones, chipped blades, scrapers, drills, bone beads, earthenware bowls, disks and sherds, mainly from ruins at Awatobi, Ariz. The explorations of Mr. Neil M. Judd in 1916 yielded a large amount of archeological material from sites of prehistoric adobe dwellings in western Utah, including hammerstones, mullers, rubbing and polishing stones, chipped blades, spear heads, arrow points and drills of stone; bone awls, scrapers, needles, chisels, punches, wedges, beads and a number of ornamented game counters; shell beads and ornaments, earthenware vessels, etc. Earthenware jars of coiled ware, a number of bowls, gray with black decoration, and a fragment of matting found over a bowl, from a cist in a cave in the southern wall of Cibollita valley, Valencia County, N. Mex., were collected by Mr. F. W. Hodge in 1913.

Dr. W. L. Abbott presented much valuable material obtained during his recent expedition to Santo Domingo, comprising hammer-

stones, pestles, polished celts and fragments of pottery vessels, mainly bowls, a limited number of the latter showing incised and relief decoration, from a cave at San Lorenzo, Samana Bay.

Among other accessions were terra cotta stamps of unusual designs and a number of beads and small pendants of jadeite from the Kiche district of Totonicapan, Guatemala, from the Bureau of American Ethnology; a large earthenware bowl with incised spiral decoration, found on an aboriginal burial site at Hogtown Bayou, Choctawhatchee Bay, Fla.—the finest specimen of its kind so far received—a gift from Mr. Clarence B. Moore, of Philadelphia; pottery vases and a stone maul collected in Chihuahua, Mexico, by Capt. Louis J. Van Schaick, U. S. Army, and lent by Mrs. Van Schaick; plaster casts of five chert blades, the originals of which, the property of Mr. Frank W. Aldrich, of Bloomington, Ill., are typical examples of a cache of 40 found on the north side of the Mackinaw River, Tazewell County, Ill., and are chipped with marvelous skill; a plaster cast of a stone sculpture representing "Quetzalcoatl," the Aztec Feathered Serpent Deity, one of the most artistically satisfactory of the many sculptures of this class found in Mexico, made in the Museum from a cast lent by the Detroit Museum of Art, through Mr. Charles C. Moore, director.

Many new specimens and selections from the reserve collections were added to the exhibition series. Two new floor cases were installed with examples illustrating the principal types of ancient pueblo pottery, and a number of small miscellaneous objects were arranged in table cases.

Investigations in the division were confined to such studies as were necessary to the classification and arrangement of specimens and the answering of inquiries received from correspondents. Dr. William H. Holmes, head curator, spent a week in classifying and rearranging the extensive ethnological collections in the Detroit Art Museum, and also labeled and arranged the American antiquities in the art museums at Toledo and Cleveland.

Old World archeology.—The most interesting acquisition in this division was a terra cotta head, about 10 inches high, a fragment found on the site of the ancient Roman town of Italica, near Seville, Spain, the birthplace of the Roman emperors Trajan, Hadrian, and Theodosius. The vigorous and at the same time delicate modeling, and especially the noble expression of the countenance, suggest the Roman portrait heads of the last pre-Christian century, among which is the marble bust labeled "Cicero" in the Uffizi Gallery at Florence. It was lent by Mrs. Zelia Nuttall.

The Museum was indebted to Hadji Ephraim and Mordecai Benguiat for important additions to the rich collections lent by them during previous years, including numerous objects of intrinsic value

and artistic interest. Among these are a pair of silver boxes for the protection of phylacteries made in Russia, chased with checker patterns and inclosed in a filigree sheath of symmetrically disposed floral designs; a brass Hanukah lamp of the seventeenth century, decorated in repoussé and chased work with the national standard of Austria; another lamp of Egyptian origin adorned with classical motifs; a brass wedding bowl, engraved with Hebrew and Persian inscriptions; 6 medallions illustrating the several stages of an oriental wedding ceremony; and an hexagonal flask of purple-colored glass impressed with various symbols, as the seven-branched candlestick, the temple gate, St. Andrew's cross, etc.

A collection of antique objects made by the late John Chandler Bancroft Davis while United States Minister to Germany, and presented to the Museum by the executors of Mrs. Davis' estate, includes necklaces, scarabs, figurines and Ptolemaic coins from Egypt, a sculptured brick from the Colosseum, Rome, and marble and terra cotta vases. A miniature dated "Moscow, April 13, 1796," representing a half length figure of Christ, the green cloak leaving the chest and arms free, while above is a bust of Mary in a red garment with hands extended over the earth upon which she seeks to look down from heaven, was a gift from Mr. Abraham Burnstine. An especially noteworthy loan from Miss Isobel H. Lenman, of Washington, consisted of 48 pieces of antique glassware, bottles, flasks, bowls, cups, tear bottles, bracelets, beads and other articles. The forms are varied and display the marvelous iridescence characteristic of the ancient glassware of Syria and Phoenicia.

The following sections were definitely installed and provided with labels: Great Britain and France, prehistoric art; Brandon modern flints, Scandinavia, Africa, Jewish ceremonial and Palestinian objects, and a collection of antique glassware. The section of religious ceremonial objects was overhauled and partly rearranged. The collection of oriental seals was studied, identified and catalogued by Dr. I. M. Casanowicz, the assistant curator in charge of the division.

Physical anthropology.—The material obtained by the curator, Dr. Aleš Hrdlička, while in Peru in connection with the preparation of exhibits for the Panama-California Exposition, 1915, was not formally accessioned until last year. It includes hundreds of objects of great value for the study of the anthropology of South America, among which are many specimens representing rare and in some instances unique anatomical features, which will greatly enhance the value of the collection in the field of anatomical and anthropological research.

Eleven brains of gorillas, including 5 adults, and 3 of chimpanzees, including 1 adult, from the Cameroons, form an exceedingly valuable addition, the specimens being for the most part in excellent

condition for study, and place the collection of primate brains far ahead of that of any other museum. A collection of skulls, skeletons and parts of skeletons from the vicinity of Vero and of Fort Myers, Fla., some of which were embedded in consolidated geological formations, was made for the Museum by the curator. Supplementing these were 7 Indian skulls with other bones presented by Mr. Ralf Bragg, of Vero, Fla.; Prof. H. L. Bruner, of Indianapolis, Ind.; Mr. J. A. Davidson and Mr. W. N. Harley, of Fort Myers, Fla.; Mr. Dempster Dole, of Captiva Island, Fla.; and Mr. Samuel L. King, of Bristol, Tenn. These specimens, furnished through the curator during and shortly after his trip to the east and west coasts of Florida, in October, 1916, are of considerable importance because of their supposed bearing on the question of man's antiquity in Florida.

For 70 anatomical specimens the division was indebted to Prof. J. Holmes Smith, of the University of Maryland. The brain of Ishi, the California Indian, recently deceased, presented by the department of anthropology of the University of California, is of special value to science, coming from an Indian of well-known mental characteristics. Casts of the Sivapithecus remains—remains of certain anthropoid apes of superior development discovered in recent years in India, and of particular interest for association with other exhibits designed to illustrate the evolution of man, were received as a gift from the Geological Survey of India, through Dr. Guy E. Pilgrim. Three Indian skulls from Colombia, South America, contributed by Gen. Cuervo Marquez, are the first specimens of this type which the Museum has acquired from that country. Sixty-six photographs of Indians from negatives made between 30 and 40 years ago, many being excellent portraits of the Shoshone and other tribes, were received from Mr. C. S. Baker, of Evanston, Wyo.

Three skulls from Hawaii were presented by Mr. H. C. Kellers, U. S. Navy, and a fourth was deposited by the Army Medical Museum, forming a valued addition to the collection of crania from those islands, which is today the most important in existence. Skulls of four white American men were contributed by Prof. J. D. Foote, of Creighton University, Omaha, Nebr., while the following were received by transfer from the Bureau of American Ethnology: Five skulls and skeletons from ancient mounds of Utah, presented to the Bureau by Dr. James Green, of Parowan, Utah; 4 skulls with other parts of the skeleton from Mesa Verde ruins, Colo., collected by Dr. J. W. Fewkes on a joint expedition by the Interior Department and the Bureau; and 2 incomplete skeletons of children obtained from ancient pueblo graves by Dr. Walter Hough. The skull of a Tennessee Indian was presented by Mr. Charles R. Dodge, of East Haven, Conn.; and 1 from an Illinois mound, by Mr. Charles Harris, of Macomb, Ill.

Progress in the installation of collections has been restricted by the lack of a sufficient amount of suitable space. The entire collection has been uniformly relabeled, however, and considerable headway was made in assorting and cataloguing the large accessions gathered or received within the last few years. Casts of brains made from rare originals in the division, a series of human bones inclosed in rock and more or less fossilized, and other specimens were installed among the exhibits.

Investigations by the curator, Dr. Hrdlička, on the white Americans of Colonial descent, were conducted at intervals throughout the year. Researches were also continued on the physical anthropology of the Sioux Indians, who were studied by the curator during his trip to the Dakotas and to Minnesota in 1916, and the report upon this subject is well advanced.

For the Committee on Anthropology of the National Research Council several reports were made between March and July, recommending improved methods in examining recruits for the Army, suggesting the advisability of standardizing the examinations, and advocating certain scientific work and collections. The final report will shortly appear in the Proceedings of the National Academy of Sciences.

Mechanical technology.—The division was fortunate in acquiring for its time-keeping collection an exceptionally rare specimen, a decimal watch, one of 12 made by Berthoud Brothers, of Paris, at the period of the first French Republic, in an attempt to adapt the metric system to time-recording. It was lent by Miss Lucy N. Smith, of Rockville, Md. An Edison tin-foil phonograph of the type brought to Washington in 1878 to be shown to the Congressional Committees on Patents, and at the same time exhibited to the National Academy of Sciences at the Smithsonian Institution, and to President Hayes, was presented by Mr. Thomas A. Edison. This specimen is of great interest as representing an early stage in the evolution of the talking machine now so marvelously developed. Within the same fascinating field are 24 pieces of graphophone apparatus illustrating the manufacture of both disk and cylinder talking-machine records, a gift from the American Graphophone Co. Seven documents, denoting honors conferred in recognition of his achievements, were deposited by Dr. Alexander Graham Bell.

A Howe sewing machine, made by Elias Howe in 1845, which sewed the first seam made by machinery, and therefore of exceptional historical value, was received as a loan from Mr. Elias Howe Stockwell. A Morse telegraph register, an experimental machine made by William Clark, of Philadelphia, for the purpose of testing a new plan of speed regulation, was contributed by Mrs. Horatio King, of Washington. Two Bell magneto hand telephones of an

early type, used in 1877, were the gift of Mr. Charles C. Bedlow, of Boston; and 2 bronze medals, awarded to Samuel F. B. Morse, by the French Government in 1867, for his invention of the electromagnetic telegraph and for his services as a Commissioner from the United States to the Paris Universal Exposition, were presented by Mr. Edward L. Morse, of Stockbridge, Mass.

The following were added to the collection of arms: A Ballard breech-loading target rifle with adjustable sights, with which, using black powder cartridges, Mr. Farrow made the world record score of 145 points out of a possible 150 at 1,000 yards distance on the Creedmoor rifle range in 1880, lent by Mr. W. Milton Farrow, of Washington. A Maynard tape primer revolver with appliances, presented to Mr. George Wallis, F. S. A., Royal Commissioner of Arts and Manufactures to the United States in 1853, the gift of Mr. G. Harry Wallis, F. S. A., of Nottingham, England. A Japanese matchlock gun, brass lock with long brass spring outside of stock, the stock and barrel richly decorated with silver inlay and brass ornaments of elaborate patterns, lent by Lieut. Col. G. C. Thorpe, U. S. Marine Corps. A finely finished 6-shot revolver made by the Cooper Firearms Manufacturing Co., of Frankford, Pa., lent by Mr. E. G. Craig, of Keswick, Va. A Bacon 5-shot revolver, made by the Bacon Manufacturing Co., of Norwich, Conn., presented by Mr. T. C. Harris, of Baltimore, Md. A double-barrel, single-trigger, percussion cap lock shotgun, made by Hollis & Sheath, of London, obtained by purchase. A Remington vest pocket pistol, purchased by Mr. Amherst W. Barber in 1863, and kept in his family since that time, gift of Mr. H. S. Barber, of Washington.

Among other accessions of value were 8 double hard rubber graphophone disks, with records of Morse telegraph signals, intended for instruction in telegraphy, gift of Mr. Walter P. Phillips, of New York. A telautograph transmitter and receiver, part of a system, the outgrowth of inventions of Elisha Gray, capable of transmitting messages in actual service over distances of 50 miles and of arrangement for distributing the messages to a large number of places, lent by the Telautograph Corporation, of New York. Two Burroughs adding machines, one made in 1890, the other in 1916, lent by the Burroughs Adding Machine Co., of Washington. A combination safe lock invented by Joshua Butterworth in 1849, made in Dover, N. J., and believed by the donor to be the first lock of its kind, gift of Mr. M. B. Carrel, of Dover. Two rare Swiss lever watch movements, without cases, one with spring going-barrel, lever escapement, chronometer balance, and split seconds hands, marked, "C. L. Guinaud, Locle"; the other with spring going-barrel, lever escapement, chronometer balance, 31 ruby jewels, and independent and quarter seconds hands, marked "Paul Baillod, Locle"; besides 7 typical

watch movements of American and foreign make, and a very curious pocket dagger; presented by Mr. Abraham Burnstine, of Washington. One brass and 2 steel bullet molds for casting round and conical bullets, and a collection of lead bullets, formerly belonging to Lieut. Commander T. B. M. Mason, U. S. Navy, gift of Mrs. Julian-James, of Washington. Eight weapons collected in Santo Domingo, including a Tower flintlock musket, 2 Lefaucheux revolvers, a number of swords, etc., contributed by Mr. John P. Hollesen, of Santo Domingo, West Indies. An American 8-day, double-spring clock, made by T. S. Sperry, of New York, acquired by purchase. A silver case lever watch, made by Lutz Bros., Locle, Switzerland, gift of Mr. Nathan Parkins, of Fort Defiance, Va. Models of the Bureau of Fisheries schooner *Grampus*, Great Lakes fishing steamer *Margaret McCann*, and fish distributing railroad car, adapted also for hatching fish in transit, deposited by the Bureau of Fisheries.

Many additions to, and improvements in the arrangement of, the exhibition collections of the division were made under the supervision of the curator, Mr. George C. Maynard, who also continued his inquiries into the history of the various classes of objects being here assembled and representing a wide field of invention and mechanical achievement.

Musical instruments.—To Mr. Hugo Worch, of Washington, the Museum is indebted for 28 valuable additions to his collection illustrating the history and development of the pianoforte, which increases to 117 the total number of instruments he has presented, including also dulcimers, spinets, clavichords, harpsichords, organs and a portable practice clavier. Too much praise can not be accorded Mr. Worch for his generous attitude in giving to the section of musical instruments such a distinctively important feature which raises it to world-wide prominence. It is unfortunate that for the present the collections of the section must remain divided, as, under existing circumstances, there is no single space in which they can all be assembled, the Worch collection being installed in the natural history building, and the general collection in the older building, but a proper readjustment of the conditions will, it is hoped, not be long delayed.

Among other accessions were an ophicleide, keyed serpent, one of a very old family of wind instruments of the horn variety, presented by Mrs. S. M. Barry and Miss E. C. Warren, of Melrose, Mass.; and a curious monochord musical instrument, used by the natives of Tonkin, French Indo-China, a gift from Mr. Thomas W. Clark, also of Melrose.

The custodian of the collection, Mr. E. H. Hawley, continued the preparation of his descriptive catalogue of musical instruments.

Ceramics.—The principal additions to the section of ceramics consisted of two loans, one of 17 pieces of old English china, which had been in the Maxwell family for over a hundred years, deposited by Mrs. Annie H. Eastman and Miss Francina M. Maxwell, of Washington, and Capt. W. J. Maxwell, U. S. Navy; the other, comprising 8 sets of fine Chinese porcelain cups and saucers, from Miss Ann Lee Peyton, of The Plains, Va.

Graphic arts.—A life-size figure of a Japanese wood-cut printer, modeled in the Museum and showing the printing work in progress, was a noteworthy addition to the exhibition series. The outfit of the operator, presented by the Imperial Government of Japan a number of years ago, is complete in every detail. Illustrating a much earlier stage in the development of graphic methods is an original Mexican painting, executed on a sheet of palmetto fiber smoothly surfaced with white clay, 20 inches wide by 29 inches high. Delineated with much skill and in delicate and harmonious coloring are a number of figures of deities and dignitaries surrounded by symbols of various kinds, the full significance of which can never be known. It is a rare and valuable specimen and was contributed by Miss Alice Kutz, of Pennington, N. J. Through the kind offices of the Mergenthaler Linotype Co., the Museum obtained an example of the earliest form of the machine for casting linotype slugs invented by Mr. Mergenthaler. It illustrates an important advance in the art of printing.

Eight volumes of the superb work illustrating the Vanderbilt house and collection were presented by Mrs. Aaron French, of Washington, as a memorial to her daughter, Mary Adelaide French. They contain 153 plates, etchings, engravings, photogravures and lithographs, some in colors, the subjects being of wide range. From Miss Emily Tuckerman, of Washington, there were received as a gift, among other examples, reproductions of 24 paintings by known masters, including engravings by Raphael Morghen and Leonardo da Vinci. Materials of the various kinds employed in miniature painting, together with a number of examples of his own work in this branch on ivory, parchment and porcelain, were contributed by Mr. Ruel P. Tolman, aid in the division. The Zeese-Wilkinson Co., of New York, presented 37 specimens illustrating their processes of making line cut and half-tone engravings. It is said that in Colonial and even later times school children had their alphabet written on small tablets of some light colored substance, as bone or ivory, and covered with transparent sheets of horn to keep them clean. An example of one of these, known as a hornbook, one and five-eighths by four inches in size, was received as a loan from Miss Edna DeNeale, of Washington.

Good progress was reported in cataloguing the collections and making them available for study by the public as well as the student. The exhibition series was also extended and much improved, but until means become available for a general revision of the accommodations, a large proportion of the cases being unsuited for the purpose, a satisfactory arrangement is impossible.

The death during the year of Mr. T. W. Smillie cut short his work of rounding out the collection illustrating the history of photography as he had planned it, and also the completion of the catalogue he was preparing for publication. Near the close of the year his successor as chief photographer of the Museum, Mr. L. W. Beeson, was likewise appointed custodian of the section of photography, and will continue the building up and improvement of this notable exhibition.

History.—Most noteworthy among the accessions of the year were many memorials of Admiral David G. Farragut, U. S. Navy, including a jeweled sword with scabbard and sword knot, presented to Farragut in 1864 by the Union League Club of New York City "in appreciation of his gallant services rendered in defence of his country," a portrait of Farragut by William Swain, a full dress uniform coat, a service belt and a cap, and a series of oil paintings, engravings, and photographs relating principally to his career as a naval officer. This valuable collection was received as a gift from the estate of Loyall Farragut, only son of Admiral Farragut, through the executors, Mr. J. Herbert Johnston and Mr. George G. Hall, of New York, and the interested agency of Rear Admiral John C. Watson, U. S. Navy, retired, a member of Farragut's staff and his flag lieutenant at the battle of Mobile Bay, and Mr. Isaac B. Millner, of the Geological Survey, also a participant in that engagement as seaman on the U. S. S. *Hartford.*

The naval service was further represented by two boys' Turkish costumes of interesting design, brought to the United States for his sons by Commodore John Rodgers, U. S. Navy, during the early part of the nineteenth century, a gift from the Misses Christina and Nannie R. Macomb, of Washington; six silver tablespoons which had belonged to Commodore Stephen Decatur, U. S. Navy, lent by Mrs. McLain Brashear, of Washington; and a silver gilt service consisting of a ewer and two goblets presented to him, when commander, and his fellow officers of the U. S. S. *Galena* by Thomas and James Harrison, of Liverpool, in recognition of services to the British steamship *Historian* in December, 1885, deposited by Rear Admiral C. M. Chester, U. S. Navy.

Among articles pertaining to the latter part of the eighteenth century received as loans were the following: From Mr. James C. McGuire, of New York, a mahogany screen and the silver base of a

nargile, the latter decorated with floral designs and the initials "G. W.," belonging to Gen. Washington at Mount Vernon; a mahogany chair which had belonged to President Madison; and a chair of curious workmanship with leather seat, back and sides, made by Benjamin Franklin and presented by him to Thomas Jefferson, who in turn gave it to James Madison. From Miss Mary M. McGuire, of Washington, a mahogany worktable owned by Dolly Madison. From Mrs. G. M. Pinckney, of Charleston, S. C., six chairs of very interesting design formerly the property of Maj. Gen. Charles Cotesworth Pinckney, American minister to France, 1796–1798. From Mrs. Douglas B. Sterrett, of Washington, a sword and scabbard owned during the War of the Revolution by Col. Jonas Johnston of the North Carolina Militia. From the Post Office Department, the manuscript journal of Hugh Finlay, surveyor of the post roads on the continent of North America, during his surveys between Falmouth, Mass., and Savannah, Ga., September 13, 1773, to June 26, 1774. From Mrs. Ella W. Mearns, of Washington, the honorable discharge from the American Army of David Niles, sergeant, Eighth Massachusetts Regiment, dated June 13, 1783, and signed by George Washington, Commander in Chief.

Other interesting relics, as follows, were also included in the loans: From the National Society of the Colonial Dames of America, a flintlock musket belonging to Daniel Boone; a sword and scabbard captured by Maj. William Edmiston of the American forces from Col. Patrick Ferguson in command of the British forces at the battle of King's Mountain in 1780, a sword captured by Col. William Campbell of the American forces from Col. James DePeyster of the British forces at the same battle; and a bullet mold of the Colonial period used during the French and Indian War, the War of the Revolution and the Civil War. From Mr. J. Grant Cramer, of East Orange, N. J., a uniform coat worn by Gen. U. S. Grant while a cadet at the United States Military Academy, West Point, 1839–1843. From Mrs. Julian-James, of Washington, the commission of Sidney Mason as United States consul at St. Johns, P. R., dated March 18, 1830, and signed by President Andrew Jackson and Secretary of State Martin Van Buren; two Masonic aprons owned by Lieut. Commander Theodorus Bailey Myers Mason, U. S. Navy; the commission of Col. Willoughby Morgan, U. S. Army, as captain, Twelfth Regiment, U. S. Infantry, dated July 23, 1812, his oath of allegiance, dated October 23, 1812, and a letter written by him on June 16, 1815.

To Mrs. Mary Maury Werth, of Richmond, Va., the Museum was indebted for the gift of the ribbon of the Grand Cross of the Order of Our Lady of Guadaloupe presented to Commander Matthew Fontaine Maury in 1866 by Emperor Maximilian of Mexico. This forms

an interesting addition to the large collection of gold and silver medals denoting recognition abroad of the services rendered by Maury to the science of hydrography and navigation, recently presented to the Nation by his descendants through Mrs. Werth. Commander Maury, it may be explained, received more distinctions of this character from foreign governments and other foreign sources than any other officer of the United States Navy. The National Academy of Sciences deposited, as an addition to its collection, a gold medal of the Institute of France, 1869, and the Decoration of the Order of the Mejidieh, awarded to James Craig Watson in recognition of his services to science.

Of sculpture and portraits the following were received: From the Metropolitan Museum of Art, New York, which owns the original, a plaster replica of the bust of Abraham Lincoln, modeled from life by Leonard W. Volk in 1860. From Mrs. John Biddle Porter, of Washington, as a loan, a plaster bust of Brig. Gen. Andrew Porter, U. S. Volunteers; a terra cotta bust of Lieut. Col. John Biddle Porter, U. S. Army, in the uniform of the First Troop, Philadelphia City Cavalry; and a plaster bust of Nicholas Biddle, financier (1786–1844). From Mr. H. K. Bush-Brown, of Washington, as a gift, the original plaster cast of his statue of Deh-gewa-mis (Mary Jemison), erected in 1910 at her grave on the Indian Council Grounds, Letchworth Park, Portage, N. Y. From Mr. Elias Howe Stockwell, of New York, through Mrs. Eustes L. Hopkins, of Larchmont Manor, N. Y., as a gift, an oil portrait of Elias Howe, jr., inventor (1819–1867). From Mr. L. C. Handy, of Washington, as a gift, a photograph of Maj. Gen. George A. Custer, U. S. Volunteers, from a negative made by Mr. M. B. Brady during the Civil War.

The numismatic collection obtained a very important addition, through the gift from Mrs. Thomas Kelly Boggs, of Flushing, N. Y., of decorations, medals and badges of the United States and foreign countries, to the number of 331, which had been assembled by her husband, the late Lieut. Thomas Kelly Boggs, of the Twenty-third Pennsylvania Infantry. The greater part of these are foreign war decorations of very timely interest, many rendered famous by the stirring events to which they relate. The following countries are represented: Argentina, Austria, Belgium, Brazil, Chile, China, France, Germany, Great Britain, Hawaii, Italy, Japan, Mexico, The Netherlands, Portugal, Roumania, Russia, Servia, Spain, Switzerland, Turkey and Venezuela. Especially noteworthy are large series of British, French and German pieces, including for Great Britain silver service medals awarded between 1809 and 1889, for France, decorations and medals awarded between 1802 and 1886, and for Germany, decorations and medals awarded between 1814 and 1897.

Italy, The Netherlands, Russia and Spain are also well shown, and the collection contains very interesting United States, French and German historical medals. It is installed as a unit in the coin and medal hall. Besides the foregoing there were a number of small though desirable accessions of coins and medals.

The collection of postage stamps, stamped envelopes and post cards was increased by 3,398 specimens, of which 3,222 were deposited by the Post Office Department, including 1,893 examples of new foreign issues received from the International Bureau of the Universal Postal Union, Berne, Switzerland, and 22 United States postage stamps of the current series, in triplicate. Noteworthy among the accessions from individual contributors was a collection of 86 stamps of Colombia, South America, and 41 of various native Indian States, the gift of Mr. A. Hatfield, jr., of New York.

Historical costumes.—This very popular section of the division of history, for the conception and development of which the Museum owes so much to Mrs. Julian-James and Mrs. R. G. Hoes, received very material acquisitions, and three draped lay figures were added to the exhibition collection, representing Mrs. Martha Jefferson Randolph, daughter of President Jefferson, Mrs. Martha Johnson Patterson, daughter of President Johnson, and Mrs. Mary Arthur McElroy, sister of President Arthur.

It is gratifying to announce the gift from Miss May S. Kennedy, of Baltimore, Md., of the white moiré silk dress, with lace veil, handkerchief and shoes, worn by Miss Harriet Lane, niece of President Buchanan, on the occasion of her marriage to Henry Elliott Johnston in 1866, which had previously been received as a loan and is installed in the group of former hostesses of the White House.

The more noteworthy loans were as follows: From Mrs. Howard Nixon Elmer, of Winnetka, Ill., a green silk dressing gown of Gen. Lafayette at the time of his visit to the United States in 1824–1825, a white satin badge bearing his portrait worn by Capt. William Elmer of New Jersey at a ball given in honor of Lafayette in 1824, and an engraved portrait of Lafayette by Alonzo Chappel. From Mrs. Richard Derby, of New York, a dress of blue satin brocaded in gold, worn by Mrs. Theodore Roosevelt at the ball on the occasion of the inauguration of President Roosevelt in 1905. From Mr. Andrew Johnson Patterson, of Greeneville, Tenn., a burnoose opera cloak of Mrs. Martha Johnson Patterson during the administration of her father, President Johnson, 1865–1869. From Miss Fanny Burke, of Alexandria, Va., a miniature terra cotta bust of Martha Jefferson Randolph, daughter of Thomas Jefferson, and a black Paisley shawl and scarf belonging to her, wearing apparel and miscellaneous relics of her descendants, a piece of light blue silk from an eiderdown quilt used by Jefferson at Paris and Monticello, and three chintz chair

covers from Monticello. From Mrs. John W. Timmons, of Indianapolis, Ind., a dress, feather and pair of shoes worn at the Court of Edward VII in 1910 by Mrs. Charles Warren Fairbanks, deposited by the Smithsonian Institution. From Mrs. R. G. Hoes, of Washington, a beaded bag owned by Mrs. James Monroe. From Mrs. Albert S. Burleson, of Washington, a hat worn by her on the occasion of her marriage. From Mrs. Katherine E. Hubbard, of Washington, a handkerchief of Queen Anne of England, 1702–1714. From Mr. Robert E. Joyce, of Washington, a child's shoe of the Colonial period, made of heavy leather with wooden sole bound with an iron band.

Among the more important gifts, in addition to the costume of Harriet Lane Johnston already mentioned, were a daguerreotype portrait of Miss Mary Abigail Fillmore, daughter of President Fillmore, from Mrs. Charles Day and Miss Ida Haven, of Buffalo, N. Y.; a dress worn by Mrs. Daisy McLaurin-Stevens, President General of the United Daughters of the Confederacy, on the occasion of the presentation by her, on behalf of that Society, of the Confederate monument at Arlington, Va., to the United States Government, June 4, 1914, from Mrs. McLaurin-Stevens; a dress and pair of shoes worn by Mary Ann Eliot Rives, wife of John Cook Rives, the founder of the "Congressional Globe," and a pair of shoes of Belle Maury Rives, wife of Bvt. Lieut. Col. Wright Rives, U. S. Army, from Miss Isabel Rives, of Washington; a mourning fan of Mrs. George Bancroft, from Miss Elizabeth Bancroft Bliss, of Washington; a gentleman's coat of lilac panne velvet embroidered in colors, worn during the latter part of the eighteenth century, from Mrs. W. Murray Crane; a napped beaver hat of the style of about 1840, from Dunlap & Co., of New York; and a collection of satin and kid shoes and slippers of the latter part of the eighteenth century, from Mrs. E. S. Brinton, of Washington.

Exhibition collections.—The exhibition collections of most of the divisions and sections of the department, so far as there is material in the Museum to draw upon, are well advanced toward what may be regarded as satisfactory completeness of arrangement, although changes are called for and are constantly going on. The divisions of ethnology, archeology, and physical anthropology in the new building are especially well in hand and present their collections to the public in a systematic and intelligible manner. The conditions are not as far advanced in the divisions of mechanical technology, history, and graphic arts in the older buildings, in connection with which much remains to be done before the exhibits can be properly presented for public inspection, the principal difficulty arising from the total inadequacy of the space now available for these branches.

The preparators' laboratory, in which a wide range of activities is conducted—the making of models and casts, the construction and

installation of lay figures, the repair of exhibits, etc., continued in charge of Mr. William H. Egberts, assisted by Mr. Frank Kotrba. The preparation of the several lay figures for the family group of the Kiowa Indians was a leading feature; the full-size model of the two rattlesnake columns of Yucatec temple, known as the Castillo, which was completed and installed, is a noble monument, and serves to demonstrate the remarkable advance made by the ancient Maya peoples toward the higher civilization. Among other work of the year may be mentioned the modeling of 4 bust figures for the historical costumes exhibit, and the modeling and preparation of a life-size figure of a Japanese wood-block printer for the division of graphic arts.

A lay figure family group of Iroquois Indians was also designed by the head curator of the department for the Royal Ontario Museum, Toronto, Canada, the sculptural work being done by Mr. U. S. J. Dunbar.

Researches and explorations.—The head curator, Mr. William H. Holmes, as a member of the National Research Council organized under the auspices of the National Academy of Sciences attended meetings in New York in September and in Cambridge, Mass., in November. He was made chairman of the section of anthropology of the Council, the task set being that of determining whether the science of anthropology could aid in the important work of contributing to preparedness of the Army and the Navy. The problem was actively taken up early in the year and the first measure considered related to the examination of recruits. The methods and practices in this branch were known to be superannuated. The most important result to be anticipated from the researches suggested is the amassing on a scientific basis of accurate physical data relating to the men of all nationalities and races entering the service and subject to examination.

The curator of ethnology, Dr. Walter Hough, continued his work in the ancient pit-dwelling villages of New Mexico, and the investigation at this particular station is thought to be finished. A limited number of artifacts illustrating the culture of the pit-dwelling people were collected, and the conclusion was reached that the people belong to the great Pueblo group, but that their culture differs somewhat decidedly from the typical pueblo culture of ancient times. It is even suggested that the pit-dwellers represent an earlier period than the great body of cliff-dwellers.

Certain explorations were made in October and November, 1916, by the curator of physical anthropology, Dr. Aleš Hrdlička, on the east and west coasts of Florida, with the view of determining the value of the evidence furnished from time to time regarding the supposedly very ancient man of this region.

Mr. Neil M. Judd, aid in ethnology, continued his investigations in western Utah under the direction of the Bureau of American Ethnology. The results render it possible to extend the northern limits of the ancient pueblo area and to say that the house remains of western Utah show a cultural relationship between the peoples of this region and the cliff-dweller and house-building peoples of Arizona and New Mexico. He also carried out extensive operations in repairing the ancient pueblo ruin of Betatakin on the Navaho National Monument in Arizona for the Interior Department.

Reference may here be made to the extensive work of Captains John W. Wright and Alexander T. Cooper, U. S. Army, whose excavations and collecting in the State of Chihuahua, Mexico, have resulted in the acquisition by the Museum of a large body of valuable archeological material.

DEPARTMENT OF BIOLOGY.

The department of biology was greatly benefited from the results of field work in different parts of the world, mainly rendered possible by the generosity of interested friends, adding new genera and species and many forms not previously represented in the Museum. Mr. H. C. Raven, through further liberal provision by Dr. W. L. Abbott, continued his collecting on the island of Celebes, and sent to Washington about 900 mammal skins, besides over 1,000 specimens each of birds and mollusks. Dr. Abbott personally spent some time in Haiti, where he obtained many birds, including species whose occurrence on that island was unexpected, reptiles and mollusks, and also in Santo Domingo where he secured a large quantity of bones of mammals from prehistoric kitchen-middens, all of which he presented to the Museum. The study of similar deposits on this and other islands of the Antilles was an interesting feature of the year's activities, a large collection of bones made by Mr. M. R. Harrington and Mr. Theodoor de Booy in Cuba, Santo Domingo and the Virgin Islands, and donated by Mr. George G. Heye, having yielded new genera of rodents, birds and reptiles which have apparently become extinct within comparatively recent times.

As the proceeds of an expedition to Cuba and Haiti by Mr. John B. Henderson, a regent of the Smithsonian Institution, accompanied by Dr. Paul Bartsch, the Museum received from Mr. Henderson as a gift numerous birds, reptiles, and fishes, and over 15,000 land and marine invertebrates, mostly mollusks. Mr. F. J. Dyer, American consul at Ceiba, Honduras, contributed a large number of insects and mollusks from that country; and Mr. Arthur de C. Sowerby transmitted mammals, birds, crustaceans and mollusks from northern China and Manchuria.

The Bureau of Fisheries deposited, as usual, valuable collections of fishes and marine invertebrates, besides many interesting specimens of mammals, birds, and reptiles; while from several bureaus of the Department of Agriculture were received large numbers of plants and many mollusks and crustaceans.

Mammals.—The collection from Mr. Raven in Celebes, though not yet critically studied as a whole, is undoubtedly of much scientific importance. Among noteworthy specimens are representatives of *Macrogalidia*, a genus of carnivores new to the Museum, and good mountable skins of the peculiar pig *Babirusa*.

Recent explorations in the Greater Antilles have brought to light the former existence of various mammals in that archipelago, a fauna which has remained practically unknown until within the last two or three years. Dr. W. L. Abbott obtained considerable material from the Indian deposits in Santo Domingo, containing the skull of a very rare and perhaps extinct rodent, *Plagiodontia*, as well as the femur of an unknown rodent whose generic status cannot be determined. The collections gathered in Cuba and Santo Domingo by Mr. Harrington and Mr. de Booy, of the Museum of the American Indian, New York, include the remains of two new genera of rodents, *Brotomys* and *Boromys*, which have been described by the curator, Mr. Gerrit S. Miller, jr., who concludes that pre-Columbian man apparently played an important part in causing their final extermination. Other mammal bones obtained by Mr. de Booy in kitchen-middens in the Virgin Islands furnish still further information regarding this fauna. A Brazilian agouti, wild-killed on the island of St. Thomas, the gift of Mr. de Booy, is of great interest as showing that this South American mammal has been introduced and established in the Virgin Islands. A collection of 26 bats from Cuba, presented by Dr. Louis Montané, includes the rare *Erophylla sezekorni*.

Ten large mammals from the region of Porcupine River, British Columbia, from which the Museum has had very little such material, were presented by Mr. William Rindsfoos by whom they were collected; and about 100 skins from Alaska were transferred by the Bureau of Fisheries. An interesting extension of range is furnished by a hooded seal from Canaveral, Fla., as there was no previous authentic record of this animal at any point south of Chesapeake Bay.

Additional storage cases rendered possible a much needed readjustment of the entire collection of small and medium-sized skulls kept in the office rooms, as some of the groups, the rodents and primates in particular, were so crowded that it had become difficult to place new accessions. Lack of proper casing facilities has, however, pre-

vented much work on the large skeletons in the attic, the arrangement of which is now very unsatisfactory, though some progress was made in labeling these specimens. The rearrangement and card cataloguing of the bats, begun two years ago, was completed, and the insectivores and rodents were also entirely rearranged.

The curator, Mr. Miller, made excellent progress with the classification of the rodents, recent and fossil, on which he has for some time been engaged with Mr. Gidley, and an elaborate paper on the subject may soon be expected. The study of the mammal bones from kitchen-middens and other Indian deposits in Cuba, Santo Domingo and the Virgin Islands also occupied much of his attention. Most of the Cuban and Santo Domingan specimens were reported on, and an account of those from the Virgin Islands was nearing completion.

Until he left the Museum to become superintendent of the National Zoological Park on October 1, 1916, the assistant curator, Mr. N. Hollister, continued his studies on the East African mammals in the Museum collections, completing the manuscript for several groups of murine rodents. Part 1 of this work, dealing with the African insectivores, bats and carnivores, was submitted for publication. Dr. C. Hart Merriam, associate in zoology, continued his researches on the bears of North America. The members of the Biological Survey, as usual, made constant use of the collections, as did Dr. O. P. Hay, of the Carnegie Institution of Washington, in connection with his studies of the American Pleistocene fauna. Mr. H. E. Anthony, of the American Museum of Natural History, who is working up the fauna of Porto Rico and Cuba, examined bats and rodents, and Dr. Milo Hellman, of New York, studied the teeth of the great apes.

The large collection of mammals made by the joint expedition of the National Geographic Society and Yale University to Peru in 1915, under the leadership of Prof. Hiram Bingham, proved to be of so much scientific importance, and the representation of South American species in American museums is so inadequate, that it was considered advisable to have it studied in London where most of the older type material is preserved. Thus, by direct comparison with the types in the British Museum, the collection would be so standardized as to serve as a future basis for authentic work on this side of the Atlantic. Permission being granted by those having direction of the results of the expedition, the material was entrusted to Dr. Oldfield Thomas, curator of mammals in the British Museum and a recognized authority on South American forms, who kindly offered to work up the collection. His report, received before the close of the year, is awaiting the making of the illustrations before publication, but a preliminary paper giving a diagnosis of the forms represented was issued by the Smithsonian Institution.

Specimens were lent for study to Dr. Witmer Stone, of the Academy of Natural Sciences of Philadelphia; Mr. Remington Kellogg, of the University of California; Dr. Joseph Grinnell, of the Museum of Vertebrate Zoology of the same university; Dr. J. A. Allen and Mr. H. E. Anthony, of the American Museum of Natural History, and Dr. G. M. Allen, of the Museum of Comparative Zoölogy.

Birds.—The Celebes material from Mr. Raven, comprising 985 skins and 37 alcoholic specimens and skeletons, supplemented most satisfactorily that transmitted the previous year from other parts of the same island. It included 2 genera new to the Museum, *Gymnocrex* and *Megacephalon*, as well as 26 species, many of which are of great rarity and particular interest such as *Osmotreton wallacei*, a pigeon forming a connecting link between the genera *Osmotreron* and *Treron*, and *Surniculus musschenbroeki*, a cuckoo of which only 5 or 6 examples are known. Dr. Abbott's own collecting in Haiti, resulting in 443 skins and 24 skeletons and alcoholic specimens, was no less important, not only as augmenting the small series previously in the Museum, but through the discovery of various birds, the occurrence of which in Haiti was entirely unexpected. In the mountains of Santo Domingo he found a new species of crossbill, *Loxia megaplaga*, representing a genus not previously recorded from the West Indies, the species, moreover, being nearest in its relationship to a boreal species of North America, the white-winged crossbill, which rarely reaches the latitude of Washington in its southern migrations. Another wholly unexpected bird from the same mountains was a new species of *Brachyspiza* (*B. antillarum*) not hitherto known generically nearer than Mexico and Curaçao. Other forms new to the collection were a potoo, *Nyctibius griseus abbotti*, also new to science, the genus having been known only from Jamaica among the Greater Antilles; *Asio noctipetens*, a new species of large owl, representing a genus now first recorded from the island; *Tyto glaucops*, a rare barn owl, of which 3 specimens were secured; *Accipiter striatus*, a hawk, and the only Antillean form of the genus not previously in the Museum; *Hyetornis rufigularis*, a cuckoo, described in 1852 from a specimen collected in 1829 and only rediscovered in 1895; *Todus angustirostris*, the narrow-billed tody; *Elaenea cherriei*, a flycatcher; *Vireo crassirostris tortugae*, a new form from Tortuga Island. A number of other species formerly only represented by the types or by one or two poor skins were also obtained by Dr. Abbott, and the anatomical material he preserved will be very helpful in determining the relationships of some of the birds of the island. Another important contribution from the Haitian avifauna was a collection of 30 skins, 86 alcoholic specimens and 4 eggs made by Dr. Paul Bartsch and

presented by Mr. John B. Henderson. It contains representatives of a new subspecies of rail of a genus which had not been recorded from Haiti, besides several other species additional to the known fauna of the island. The eggs are those of the palm crow, *Corvus palmarum*, and are new to the Museum.

Reference has already been made to the bones of birds from the kitchen-midden deposits in the Virgin Islands, collected by Mr. Theodoor de Booy and presented by Mr. George G. Heye. Through exchange with the Zoological Museum of the University of Michigan, 149 skins from the Santa Marta Mountains in Colombia, a region hitherto not well represented in the Museum, were obtained, among them being 6 species new to the collection. Two additions to the avifauna of the United States were a pine grosbeak, *Pinicola enucleator kamtchatkensis*, from Alaska, received from the Bureau of Fisheries, and 19 skins of the San Lucas sparrow, *Passerculus rostratus guttatus*, a Lower California form, part of a series of 123 carefully prepared specimens from the vicinity of Los Angeles, Cal., collected by Mr. Edward J. Brown, a collaborator of the Museum. A series of 24 skins of the western horned owl, *Bubo virginianus pallescens*, from one locality, contributed by Mr. Albert E. Colburn, of Los Angeles, Cal., is important for demonstrating the range of individual variation in this group.

Interesting additions in oology were 5 eggs of the Australian Cape Barren goose, *Cereopsis novae-hollandiae*, laid in captivity in the National Zoological Park, and a set of 6 eggs of the white-throated swift, *Aeronautes melanoleucus*, together with 2 nests, the gift of Mr. Wilson C. Hanna, of Colton, Cal. The former were entirely new to the Museum, while of the latter it had possessed only a single egg.

The rearrangement of the study series of skins was extended to the remainder of the ducks, and to the gulls, auks, waders, cranes, herons, hemipodes, sandgrouse, pigeons, tinamous, megapodes, curassows and grouse and a part of the pheasants, drawer and temporary case labels being also provided. Specimens of great rarity and certain extinct birds were removed from the general collection to the office, where they can be kept under immediate supervision and frequently inspected. Four types of the United States Exploring Expedition were identified and incorporated with the type series. They are *Eopsaltria flavifrons*, *E. albifrons*, *E. icteroides* and *Eudynamys cuneicauda* Peale. The type of *Aegialitis microrhynchus* Ridgway was also brought to light, and the probable type of *Thalassidroma gracilis* Elliot was discovered.

The alcoholic specimens received during the year were catalogued and labeled, and, with the similar additions of the previous two years, were distributed in the collection. The additions to the skele-

ton collection were also catalogued, but since the material of this character is received in the rough and requires to be cleaned before it can be systematically installed, this work progresses slowly with the amount of help available and is greatly behindhand. The specimens belonging to the family Corvidae and the order Tubinares were rearranged, and some progress was made with the skeletons of the herons and rails.

Mr. Robert Ridgway, curator of the division, brought nearly to completion the manuscript of part 8 of the Museum Bulletin 50—The Birds of North and Middle America. The assistant curator, Dr. C. W. Richmond, was mainly occupied with routine work, including the identification of collections. He added about 2,000 cards to the office catalogue of species, and nearly 3,000 generic cards, and in this connection finished a paper on generic names proposed for birds for the period 1906–1915, besides determining the status of the Philippine flycatcher, *Terpsiphone nigra*, and describing some new birds from Haiti. Mr. J. H. Riley, aid, was chiefly employed in the rearrangement of the study collection of skins and in work incident to the distribution of material. He prepared a key to the immature plumages of North American gulls for the curator, identified material from Santo Domingo and China, describing 3 new birds from the former, and made some progress on a paper based on the Siberian birds collected a few years ago by Mr. Copley Amory, jr.

The late Dr. E. A. Mearns, U. S. Army (retired), associate in zoology, in spite of failing health and strength, continued early in the year his study of East African and Philippine birds. With his death, the work on the birds of the Smithsonian African Expedition was brought to an abrupt close, as he left no manuscript that would serve as the basis of a final and comprehensive report on the collections with which his name has been so closely identified both as collector and recorder in preliminary papers. About one-third of the material remains to be identified, except for the provisional determination of genera for cataloguing purposes, though all of the specimens had been measured and the measurements arranged on sheets, with additional memoranda and notes for certain of the species fully identified. Mr. A. C. Bent, of Taunton, Mass., made sufficient progress with his work on the life histories of North American birds to enable him to submit the manuscript for the first volume of a series designed to treat of the subject.

Among members of the Biological Survey of the Department of Agriculture who frequently consulted the collections, Dr. H. C. Oberholser studied the skeletons of auks, ducks, etc., and prepared several papers on Dr. Abbott's East Indian collections, particularly the birds inhabiting the various islands and island groups in the

Java Sea; while Dr. Alex. Wetmore, to whom the division is indebted for verifying and arranging portions of the skeleton collection, examined birds from Polynesia in continuance of his work on the collections made by Dr. C. H. Townsend, and studied the bird remains from the West Indian kitchen-middens. Other ornithologists who spent more or less time in the division in connection with their researches were Dr. W. L. Abbott, of Philadelphia; Dr. Thomas Barbour and Mr. Outram Bangs, of the Museum of Comparative Zoölogy; Mr. A. C. Bent, of Taunton, Mass.; Dr. Frank M. Chapman and Mr. James P. Chapin, of the American Museum of Natural History; Mr. W. H. Osgood, of the Field Museum of Natural History; Mr. W. E. Clyde Todd, of the Carnegie Museum; Mr. P. A. Taverner, of the Victoria Memorial Museum, Ottawa, and Mr. J. H. Fleming, of Toronto, Canada; Dr. John C. Phillips, of Wenham, Mass.; Dr. L. C. Sanford, of New Haven, Conn.; Mr. J. Parker Norris, of Philadelphia; Mr. L. B. Cushman, of North East, Pa.; Mr. Ralph W. Jackson, of Cambridge, Md.; Messrs. H. B. and H. H. Bailey, of Newport News, Va.; Dr. R. M. Strong, of Vanderbilt University Medical School; Mr. Henry K. Coale, of Highland Park, Ill.; Mr. B. H. Swales, of Grosse Ile, Mich.; Mr. F. C. Willard, of Tombstone, Ariz.; Mr. S. F. Rathbun, of Seattle, Wash.; Mr. Joseph Mailliard, of San Francisco, Mr. J. Eugene Law, of Hollywood, Mr. William Leon Dawson, of Santa Barbara, and Mr. A. M. Ingersoll, of San Diego, Cal.

Specimens were lent for study to several of the above and also to Dr. Witmer Stone, of the Academy of Natural Sciences of Philadelphia; Dr. Jonathan Dwight, of the American Museum of Natural History; Mr. C. B. Cory, of the Field Museum of Natural History; Mr. L. A. Fuertes, of Ithaca, N. Y.; Mr. Arthur T. Wayne, of Mount Pleasant, S. C.; and Mr. Frank Bond and Dr. R. W. Shufeldt, of Washington.

Reptiles and batrachians.—Pre-eminent among the accessions in the entire history of this division was a bequest from Mr. Julius Hurter, sr., of St. Louis, Mo. For many years a correspondent of the Museum and an enthusiastic collector, Mr. Hurter had gathered one of the largest and finest private collections of its kind in existence, its principal scientific importance consisting in its splendid series of Missouri reptiles and batrachians which served as the basis for his "Herpetology of Missouri," published in 1911. Not satisfied solely with a local representation, however, Mr. Hurter made several collecting trips to neighboring States and to Cuba and Central America; friends in other countries sent him specimens, and he maintained exchanges with many foreign collectors and museums. In this way he built up a well balanced systematic collection in which most of the important subdivisions are well represented, and

as his preparations were always faultless and he only accepted good specimens, it is of unusual merit. Desirous that his life work should not be scattered and confident that the collection would be properly cared for here, it was bequeathed to the National Museum in his will dated February 1, 1913. Mr. Hurter's death, at the age of 74 years, occurred on December 6, 1916, and in conformity with his wishes, one of the preparators of the Museum, Mr. C. E. Mirguet, packed the collection in January, and it reached Washington in excellent condition. The cataloguing, which was completed before the close of the year, shows 3,575 specimens, quite a number of genera and species new to the Museum and many very rare forms previously represented by only a few or poor specimens. The collection will be kept together as a unit.

Among other accessions of reptiles and batrachians may be mentioned 116 specimens collected in Haiti and presented by Dr. W. L. Abbott, 115 specimens obtained in Cuba and Haiti by Dr. Paul Bartsch and presented by Mr. John B. Henderson, and 213 specimens from Panama, a contribution from the Smithsonian biological survey of the Canal Zone. An interesting addition to the herpetological fauna of North America, made last year in the State of Washington by a collector for the Zoological Museum of the University of Michigan, was a salamander of the West Siberian genus *Ranodon*. Paratypes of the new species, *R. olympicus*, which had been sent to the curator for determination, were received as a gift. A paratype of another new American species, *Cadea palirostrata*, from the Isle of Pines, Cuba, was obtained in exchange from the American Museum of Natural History, after its status had been determined by comparison with specimens of *Cadea blanoides* in the national collection.

The head curator, Dr. Leonhard Stejneger, continued his studies of North American turtles, but could give little time to scientific work. He was able, however, to finish a short illustrated paper on Cuban reptiles and amphibians, published during the year, and descriptions of a few new species in the collection. Among naturalists who consulted the collections, with the subjects of their inquiries, were the following: Dr. Thomas Barbour, of the Museum of Comparative Zoölogy, West Indian reptiles; Mr. E. R. Dunn, of Haverford College, the genus *Desmognathus* and the salamanders and turtles of North Carolina; Dr. M. M. Metcalf, of Oberlin College, protozoan parasites in frogs and toads; Mr. E. G. Holt, of the Biological Survey, the identification of specimens; and Dr. O. P. Hay, of the Carnegie Institution of Washington, osteological studies. Specimens were lent for study to Dr. Barbour, and to Mr. Vic Housholder, of the University of Kansas Museum.

Fishes.—Transfers of fishes from the Bureau of Fisheries, though limited in extent, were of much scientific importance, as they included 72 types, cotypes and paratypes, of which 40 were of species collected during the *Albatross* expedition to the Philippine Islands in 1907–1910. Leland Stanford Junior University presented the type specimen of *Siphateles mohavensis.* Mention should also be made of 268 specimens obtained in Cuba and Haiti during the spring of 1917 by Mr. John B. Henderson and Dr. Paul Bartsch, and of 16 specimens sent from China by Mr. Arthur de C. Sowerby.

Some progress was made by members of the staff in the study of the Cuban and other West Indian collections, and it is expected that an account of these investigations may be furnished during the current year. The report on the fresh-water fishes of the Panama Canal Zone collected under the auspices of the Smithsonian biological survey of that region, prepared by the late Dr. Seth E. Meek and Mr. S. F. Hildebrand, with the assistance of Dr. Carl H. Eigenmann, of Indiana University, in the determination of species, was completed and published. The Manchurian collection from Mr. Sowerby yielded a new species and new subspecies, which were described by Mr. Isaac Ginsburg, aid in the division. Mr. Barton A. Bean, assistant curator, examined and reported upon various specimens for Mr. Alvin Seale, of the Museum of Comparative Zoölogy, and Dr. C. H. Gilbert, of Leland Stanford Junior University. Dr. Eigenmann consulted the collections in connection with his work on material from northern South America, and Mr. Hildebrand, of the Bureau of Fisheries, studied the salt water fishes obtained by himself and the late Dr. Meek in the Panama Canal Zone, a large number of which were also sent to him at the Marine Biological Laboratory at Beaufort, N. C., of which he is the director. Specimens were lent for study to Dr. Wilbur Smith, of the School of Medicine of Tulane University; Dr. J. O. Snyder, of Leland Stanford Junior University; and Mr. John T. Nichols, of the American Museum of Natural History.

Insects.—Transfers from the Bureau of Entomology of the Department of Agriculture aggregated nearly 3,000 specimens of insects of various orders. Mr. F. J. Dyer, American consul at Ceiba, Honduras, collecting during his spare time, made several important contributions, one of which contained about 1,400 and another 275 specimens. Mr. B. Preston Clark, of Boston, Mass., presented 100 Lepidoptera from Peru and two other collections of the same order from Mexico and Alaska, about 300 Hymenoptera from western Argentina, and some 2,000 miscellaneous insects from Mt. Kinabalu, northern Borneo.

The systematic installation of specimens was continued to the extent of 500 standard drawers. The Hemiptera are now practi-

cally all transferred to such containers and largely arranged in a manner for ready reference. Of this order the Museum has in its permanent collection about 150,000 specimens, of which 60,000, representing about 5,000 species, are determined. The Museum is also in possession of the collection of Hemiptera deposited by Mr. C. F. Baker. The services of Prof. T. D. A. Cockerell, of the University of Colorado, were obtained to arrange and name, as far as possible, the collection of exotic bees which are likewise now in convenient shape for examination. While none of the exhibition series of District of Columbia beetles has yet been installed, Mr. H. S. Barber has been assembling the material and, the printed labels having been furnished, the work will soon be taken up.

Dr. L. O. Howard, curator of the division, in conjunction with his assistants, Dr. Harrison G. Dyar and Mr. Frederick Knab, finished the second part of the fourth volume of the important monograph on "The Mosquitoes of North and Central America and the West Indies," which is being issued by the Carnegie Institution of Washington. In this volume the remainder of the Culicine and the Megarhinine and Anopheline mosquitoes are described, thus completing the systematic treatment. The associate curator, Mr. J. C. Crawford, continued his studies of the Hymenoptera, but, owing to the press of office work, was unable to devote much time to them. The scientific activities of other members of the staff and of other entomologists who have worked upon material belonging to the division are indicated by 129 titles in the bibliography, 33 of which belong to the former.

Aside from the scientific employees of the Bureau of Entomology who have access to the collection at all times, and many of whom also conduct their researches in the museum laboratories, the collections were consulted by a number of entomologists and students connected with various other institutions. Mention has already been made of the work of Prof. Cockerell. Dr. W. M. Wheeler, of the Bussey Institution, collaborated with Mr. Rohwer for a short period in arranging the Pergande collection of ants. Others who visited the division were Mr. C. H. Kennedy, Mr. C. W. Richmond, and Prof. Wm. T. M. Forbes, of Cornell University; Mr. H. G. Barber, of New York; Dr. J. Bequaert, of the American Museum of Natural History; Mr. F. G. Carnochan, of the Bussey Institution; Mr. B. Preston Clark, of Boston; Prof. Herbert Osborn and Prof. J. S. Hine, of the Ohio State University; Mr. Morgan Hebard, of Philadelphia; and Mr. P. H. Timberlake, of Honolulu.

Specimens of Odonata were lent for study to Dr. F. C. Calvert, of the University of Pennsylvania; of Hymenoptera to Prof. Cockerell; of Diptera to Mr. E. T. Cresson, jr., of the Academy of Natural Sciences of Philadelphia, and Dr. J. Bequaert; of Coleoptera

to Prof. G. de Lapouge, of the University, Poitiers, France, and Mr. J. A. Hyslop, of Hagerstown, Md.; of Hemiptera to Mr. Fred Muir, of the entomological station of the Hawaiian Sugar Planters' Association, Honolulu; of Mallophaga to Prof. Vernon L. Kellogg, of Leland Stanford Junior University; and of Forficulidae to Mr. Morgan Hebard, of the Academy of Natural Sciences, Philadelphia.

Marine invertebrates.—The most extensive and valuable accession of the year, a contribution from Mr. John B. Henderson, of Washington, consisted of about 15,000 mollusks and 150 miscellaneous marine invertebrates collected in Cuba and Haiti by the donor and Dr. Paul Bartsch during March, April and May, 1917. Filling many gaps in the representation of Haitian mollusks especially, Mr. Henderson's gift has made the national collection of West Indian land shells the finest in existence. The Bureau of Fisheries transferred over 3,400 specimens besides 248 unassorted lots, including the annelids, with many types, collected by the steamer *Albatross* off the coast of California in 1904 and worked up by Dr. J. Percy Moore, and the parasitic copepods obtained by Dr. Charles B. Wilson at Fairport, Iowa, and other places in the Middle West. The bureaus of Biological Survey, Entomology and Plant Industry of the Department of Agriculture transmitted about 400 specimens, chiefly of mollusks and crustaceans.

Dr. W. L. Abbott presented over 1,000 specimens of mollusks from Celebes, collected by Mr. H. C. Raven, besides about 450 specimens from Santo Domingo and 60 specimens from Haitian cave deposits, gathered by himself. Several hundred specimens of shells and a number of crustaceans from Manchuria and North China were included in the material from Mr. Arthur de C. Sowerby. Mr. James Zetek contributed 769 specimens, chiefly mollusks, from Panama; American consul Francis J. Dyer, some 900 marine invertebrates from Honduras; and Mr. B. Preston Clark, of Boston, 100 land shells collected by himself in July, 1916, on Mt. Kinabalu, British North Borneo, at an altitude of between 3,000 and 8,000 feet. Prof. G. S. Dodds, of the University of Missouri, presented 301 vials of entomostracan material obtained in 124 lakes and ponds in Colorado, and forming the basis of his paper on the "Altitudinal distribution of Entomostraca in Colorado." Fifty-five species of Entomostraca are represented.

The mollusk collection, as a whole, has been rendered more convenient for reference by label blocks, containing the names of genera and subgenera at the head of the various sections and by cards with the specific name at the head of each species. Dr. Dall has continued the rearrangement of the mollusk collections from the west coast of America and has incorporated all hitherto unclassified material, at the same time correcting the nomenclature. The revision of the

bivalves has been finished and a check list published, while the revision of the gastropods is nearly completed. In the rearrangement of the European and Asiatic land shells, now in progress, much of the material has been reidentified and the nomenclature brought up to date.

The collection of Unionidae has been assembled in one room which will be known as "The Isaac Lea Naiad Room." The Jeffreys collection and the east coast marine mollusks are being completely revised and also segregated in one room. The Sphaeriidae were overhauled by Dr. Victor Sterki, the identifications and nomenclature being corrected and the collection relabeled.

The labeling, registering, and card cataloguing of the extensive collections of echinoderms (ophiurans, asteroids, echinoids, and holothurians) have been completed and they are ready for systematic distribution in the storage stacks. The same is also true with respect to the Pyrosoma and Salpidae of the *Albatross* Philippine expedition, of 1907–1910; the annelids of the west coast of America studied by Dr. J. Percy Moore; and certain collections of North American decapod crustaceans reported on by Miss Mary J. Rathbun.

Dr. William H. Dall, honorary curator of mollusks, brought nearly to completion his revision of the west American marine gastropods, and finished a revision of the pelecypods, a check list of which was published by the Southwest Museum of Los Angeles, Cal. Among other papers by him published during the year were a synopsis of the revision of the families Columbellidae, Alectrionidae and Epitoniidae, as well as descriptions of the new species of bivalves discovered during this work; and a report on the invertebrate fauna of the Flint River Oligocene beds of Georgia and Florida. He also prepared papers on the fossil and land shells of the Galapagos Islands for the California Academy of Sciences; reports on the fossil and recent mollusks collected by the Canadian Stefansson Arctic expedition; a report on the Arctic Tertiary fossils collected by the Geological Survey; and a revision of the classification of the Turritidae and descriptions of new North Pacific gastropods. Miss Mary J. Rathbun, associate in zoology, prepared the major part of a second bulletin on American crabs, comprising the Oxyrhyncha or spider crabs.

In addition to the papers cited in the bibliography, the curator of the division, Dr. Paul Bartsch, completed reports on the Philippine land shells of the genus *Amphidromus* and the west American melanellid mollusks, and has in preparation monographs on the Philippine operculate land shells and the mollusks of the Windward and Leeward Islands of the West Indies. His investigations on the Bahama cerions planted on the Florida Keys, under the auspices of the Carnegie Institution of Washington, were continued. Dr.

T. Wayland Vaughan, custodian of madreporarian corals, devoted the greater part of his time to the study of fossil material, though giving some attention to living forms. A paper on "The reef-coral fauna of Carrizo Creek, Imperial County, California, and its significance" deals in part with recent corals, and Dr. Vaughan also collaborated with Dr. Marcus Goldman in a continuation of their investigations of the chemical constituents of the ocean bottom.

Mr. Austin H. Clark, assistant curator, completed his studies of the *Siboga* crinoid collection and of the crinoids in the Victoria Memorial Museum of Ottawa, and a revision of the crinoid families Thalassometridae, Charitometridae, Antedonidae, and Bourgueticrinidae, besides describing a number of new species of crinoids, starfishes and ophiurans found in the Museum collections. Investigations in progress related to the *Ingolf* collection of crinoids, the crinoid larvae of the German South Polar ("Gauss") expedition, and further parts of his "Monograph of Existing Crinoids." He also began the working up of the echinoderms of the Canadian Arctic expedition.

Mr. William B. Marshall, assistant curator, completed a paper on new and little known species of South American fresh-water mussels of the genus *Diplodon*, and commenced a preparatory study of the South American Naiades. Work was continued by Mr. Waldo L. Schmitt, assistant curator, on the decapod crustaceans of the west coast of America; by Mr. H. K. Harring, custodian of the rotatoria, on the rotifers of the District of Columbia and elsewhere; by Mr. C. R. Shoemaker, aid, on amphipods, and by Miss Pearl L. Boone, aid, on isopods. Mr. Harring also spent two months exploring certain lakes and swamp regions in Wisconsin, where he secured much valuable material.

Dr. Charles Wardell Stiles, custodian, and Dr. B. H. Ransom, assistant custodian, of the section of helminthological collections, report various investigations on the parasites of man and other animals, which, so far as they were published during the year, are noted in the bibliography.

Mr. John B. Henderson continued his studies of Antillean and east American marine mollusks. The mollusk collections were consulted in connection with their researches by Miss Julia A. Gardner and Dr. Charles W. Cooke, of the Geological Survey; Mrs. G. L. Chaney, of Salem, Mass.; Mr. George H. Clapp, of Pittsburgh, Pa.; and Mrs. T. S. Oldroyd, of Los Angeles, Cal.

Specialists engaged in working up collections for the Museum who visited the division during the year, and the subjects which had their attention, were as follows: Dr. Joseph A. Cushman, of the Boston Society of Natural History, the Foraminifera of the North Atlantic Ocean; Prof. Charles C. Nutting, of the University of Iowa, para-

sitic and other hydroids; Dr. Aaron L. Treadwell, of Vassar College, annelid worms; Dr. Maynard M. Metcalf, of Oberlin College, Salpa and Pyrosoma; Dr. Henry B. Bigelow, of the Museum of Comparative Zoölogy, medusae; and Dr. Willard G. Van Name, of the American Museum of Natural History, ascidians. Dr. Victor Sterki, of New Philadelphia, Ohio, spent six weeks in the division, naming the collection of Spheriidae.

Among contributions by collaborators published during the year were, part 6 of a monograph of the Foraminifera of the North Pacific Ocean, by Dr. Cushman; "The sessile barnacles (Cirripedia) contained in the collections of the U. S. National Museum, including a monograph of the American species," by Dr. Henry A. Pilsbry; "North American earthworms of the family Lumbricidae in the collections of the U. S. National Museum," by Prof. Frank Smith; "North American parasitic copepods belonging to the Lernaeidae with a revision of the entire family," by Dr. Charles Branch Wilson; and a number of shorter papers mostly descriptive of new species, by Dr. Walter K. Fisher, Prof. W. P. Hay, Mr. John B. Henderson, Dr. Victor Sterki, and Dr. Aaron L. Treadwell.

Other reports received in manuscript or soon expected were as follows: Two on results of the expedition of the steamer *Albatross* to the northwestern Pacific Ocean in 1906, namely, the chitons, by Dr. S. S. Berry, and the calcareous sponges, by Mr. Sanji Hozawa. Five on material from the *Albatross* Philippine expedition of 1907–1910, namely, the Hydromedusae, siphonophores and ctenophores, by Dr. Henry B. Bigelow; the ophiurans, by Dr. René Koehler; the Scyphomedusae, by Dr. Alfred G. Mayer; the Salpidae, by Dr. Maynard M. Metcalf; and the ascidians, by Dr. Willard G. Van Name; two taxonomic studies by Dr. Metcalf, one on the Salpidae, with the assistance of Miss Mary M. Bell, the other on Pyrosoma, with the assistance of Mr. Hoyt S. Hopkins; and an account of the altitudinal distribution of Entomostraca in Colorado, by Prof. G. S. Dodds.

In addition to new material supplied to several of the above-named collaborators, specimens were lent for study to Dr. A. G. Huntsman, of the University of Toronto, Canada; Dr. Walter Faxon and Dr. Hubert L. Clark, of the Museum of Comparative Zoölogy; Dr. G. C. Crampton, of the Massachusetts Agricultural College; Dr. Wesley R. Coe, of Yale University; Dr. Raymond C. Osburn, of the Connecticut College for Women; Dr. J. Percy Moore, of the Academy of Natural Sciences of Philadelphia; Mr. Frank J. Myers, of Bethlehem, Pa.; Prof. L. B. Walton, of Kenyon College; Prof. Harry B. Torrey, of Reed College, Portland, Oreg.; Dr. and Mrs. W. J. Crozier, and Dr. C. Dwight Marsh, of the Bureau of Plant Industry.

Plants.—The number of plants received during the year was 79,155, or double the yearly average since 1900 with the exception of

1905 and 1913. The principal accession consisted of that part of the Biltmore Herbarium that was saved from the disastrous flood of July 15 and 16, 1916, aggregating about 25,000 specimens. This valuable herbarium, established and maintained for many years at Biltmore, N. C., by the late George W. Vanderbilt, contained at the time of the flood upward of 100,000 specimens, and was especially noteworthy for its representation of plants of the southeastern United States, including the Chapman Herbarium, and for its series of Crataegus specimens brought together through the personal efforts of the curator, Mr. C. D. Beadle. Among the salvaged material are many Crataegus types and much of historic interest from the Chapman collection. Nearly all of the uninjured 25,000 specimens are mounted and will be extremely useful to the National Herbarium. This most desirable addition, which was accompanied by the books saved from the botanical library, subjected to equal injury at the same time, reached the Museum as a generous gift from Mrs. Vanderbilt.

Another notable individual accession was the private cryptogamic collection of Prof. O. F. Cook, comprising approximately 15,000 specimens, chiefly of mosses, hepatics, fungi, and myxomycetes. Presented to the Museum by the owner, it was acquired by him partly through exchange and purchase, but chiefly through his personal collecting in the northeastern United States and in Liberia. Transfers from the Department of Agriculture aggregated 5,877 specimens, mostly collected by botanists of the Bureau of Plant Industry, and including about 600 specimens of tropical American palms, brought together through the personal interest of Prof. Cook, 700 Alaskan plants, and about 2,000 specimens, largely of ferns and grasses, obtained in the Hawaiian Islands by Mr. A. S. Hitchcock.

The principal acquisitions through exchange were as follows: From the New York Botanical Garden, 3,152 specimens; from the Gray Herbarium of Harvard University, 3,250 specimens, chiefly North American; from the British Museum, London, 1,065 African plants; from the Bureau of Science, Manila, 1,496 specimens, many of those from the Philippine Islands constituting a very complete set of the "Species Blancoanae," a series prepared under the direction of Mr. E. D. Merrill to illustrate the species of Blanco's Flora de Filipinas, a large proportion of which has remained problematical; from the Missouri Botanical Garden, 3,165 specimens, mainly from the United States. About 1,000 Venezuelan plants collected by Dr. and Mrs. J. N. Rose were received as a gift from the Carnegie Institution of Washington, while about 5,000 specimens from New Mexico were collected by Mr. Paul C. Standley, assistant curator. Among the material purchased were 875 specimens from China, and 654 specimens from Uganda, East Africa.

Approximately 24,400 specimens were mounted, practically all of these being also recorded and a considerable proportion distributed in the herbarium. The segregation of type and duplicate type-specimens was continued by Mr. Standley, 7,381 having now been removed, catalogued, provided with distinctive unit covers, and arranged in systematic sequence in separate cases. In the improvement of the cryptogamic collections, attention was especially given to the Hepaticae, which were entirely rearranged by Miss Mary F. Miller, and thousands of accumulated specimens incorporated. The arrangement of the fungus collection was completed by Mr. H. R. Rosen. Efforts were also directed to the determination of accumulated unnamed cryptogams, numerous lots being sent for that purpose to specialists, namely, 182 specimens of Algae, 450 specimens of fungi, 411 specimens of lichens, about 300 specimens of Hepaticae, and 267 specimens of mosses.

The so-called District Herbarium, consisting of specimens collected in the vicinity of Washington, was studied critically during the year by members of the staff and by others interested in the preparation of a "District Flora," and the collection was considerably increased by new material. In the distribution of duplicates, excellent progress was made, and a gratifying return was received from the institutions to which material was sent. Of the specimens prepared for this purpose, there yet remain to be sent out the extensive Canary Island collections of Mrs. Alice Carter Cook, and a considerable number of miscellaneous cryptogams from various sources.

Mr. Frederick V. Coville, curator of the division, continued his horticultural studies of *Vaccinium;* Dr. J. N. Rose, who resumed his position of associate curator on January 1, 1917, his work on the Cactaceae in collaboration with Dr. N. L. Britton; and Mr. William R. Maxon, associate curator, his researches on North American ferns. Mr. Paul C. Standley, assistant curator, prepared a paper on the North American species of *Ficus* and a manuscript of the families Amaranthaceae and Allioniaceae for the "North American Flora," besides beginning work on the Rubiaceae and continuing the naming of the plants obtained by the Smithsonian African Expedition. Capt. John Donnell Smith, associate in botany, continued his studies of tropical American plants and Mr. E. S. Steele, editorial assistant, gave attention to the *Laciniaria.*

The herbarium was consulted as usual by botanists of various bureaus of the Department of Agriculture, and, among others, by Dr. William Trelease, of the University of Illinois, and Mr. Earl E. Sherff, of Chicago, Ill. The number of specimens sent for study outside of Washington was unusually large, much of the material consisting of lower cryptogams, groups in which the division has no

specialists. In nearly all of the researches for which these were intended the Museum has been or will be benefited in greater or less degree. The principal sendings were of *Pentstemon*, to the New York Botanical Garden, for Dr. Francis W. Pennell; of *Carex*, to Mr. K. K. Mackenzie, of East Orange, N. J.; of woody plants, chiefly *Quercus*, *Padus*, *Fraxinus*, *Tilia* and *Salix*, to the Arnold Arboretum, Jamaica Plain, Mass.; of *Bidens*, to the Field Museum of Natural History, for Mr. Earl E. Sherff; of *Aquilegia*, to the University of Wyoming, for Mr. Edwin Payson; of *Senecio*, to the Missouri Botanical Garden, for Dr. J. M. Greenman; of *Euthamia* and *Muhlenbergia*, to Mr. B. F. Bush, of Courtney, Mo.; of *Viguiera* and *Polygala*, to the Gray Herbarium, for Dr. Sidney F. Blake.

Exhibition collection.—The group of wapiti, or so-called American elk, mounted by Mr. James L. Clark, of New York, and awarded a gold medal at the Panama-Pacific International Exposition, mentioned in the last report as having been temporarily placed, was furnished with an appropriate case during the year and installed in the great hall of mammals between the moose and bison groups. This artistic preparation of male, female and young in a snowy landscape, so realistically imitating nature, forms an exhibit which for truthful representation and beauty of execution is unsurpassed in any other museum. The zebu and yak, belonging to the oriental section, were reinstalled together in a large case. The use of artificially colored sand on the bottom of large cases holding several mammal specimens, displacing the awkward wooden stands, introduced the previous year, was extended to some of the African antelope cases, with entirely satisfactory results. By this method the animals can be given any desired position and a much more varied and effective arrangement secured. The great African buffalo group was completed by the introduction of a calf. Two American deer replaced older specimens of the same form, and a brocket deer from South America and a number of small mammals were among the additions.

The whale hall was cleared of the storage cases which had been provisionally used there, and series of large photographs were installed showing the making of the plaster molds for the large sulphur-bottom model and the roughing out of the skeleton at the Newfoundland whaling station. Many old specimens in the bird exhibition, especially among the ducks, herons and pigeons, were remounted or thoroughly renovated and the display as a whole was greatly improved, but no noteworthy new preparations were added.

Explorations.—Several of the expeditions mentioned in the last report as then in progress were continued, and wholly without expense to the Museum. Mr. H. C. Raven, who, through the generosity of Dr. W. L. Abbott, was enabled to return to Celebes and

spend the entire year in that island, transmitted large and valuable collections, as noted elsewhere. During the first part of his stay he explored the extreme northeastern peninsula, working thence southward toward the central area where he collected a number of adult babirusa, the hairless Celebesian hog with the enormous upturned tusks in both jaws. Dr. Abbott personally visited the island of Haiti, in the eastern part of which he remained for some weeks in the fall of 1916. In one of the caves in the coast region bordering the Bay of Samana, Santo Domingo, he discovered the broken skull of a rodent, *Plagiodontia*, of which no specimen has been found since the original type described in 1836. Subsequently in the pine region in the mountains of the interior, he made several interesting bird discoveries and also collected reptiles and mollusks. Dr. Abbott returned to the island early in 1917, exploring the northwestern part of Haiti, including the island of Tortuga, and making fresh discoveries. He was still in the field at the close of the year. Mr. Arthur de C. Sowerby's explorations in China were confined chiefly to Tientsin, but through correspondents he was able to secure a number of interesting specimens for the Museum from other localities.

Mr. John B. Henderson had dredging work continued along the Pourtales plateau by his yacht *Eolis*, presenting to the Museum the marine invertebrates obtained. In the spring of 1917, with Dr. Paul Bartsch as his guest, he made an expedition to Cuba and Haiti for the purpose of exploring certain regions, particularly in Haiti, of which island the land mollusks have been very poorly represented in the collections. A splendid series of about 15,000 specimens of mollusks was secured, besides many specimens of miscellaneous marine invertebrates, insects, fishes, batrachians, reptiles, birds, mammals and plants, all of which were received as a gift from Mr. Henderson. The exploration occupied two months, starting early in March, which month was spent in eastern Cuba, and in Haiti was conducted in the "Cul-de-Sac" region and the northern coast of the western peninsula.

Mr. George G. Heye, of New York, in connection with archeological explorations in the Antilles, had investigations made of the refuse heaps of kitchen-middens left by the aboriginal population. The animal bones obtained by Mr. Theodoor de Booy in such places in Santo Domingo and the Virgin Islands were submitted to the Museum, and their study resulted in the discovery of a very remarkable extinct fauna, of which mention has already been made. Mr. William Palmer, who examined certain cave deposits in western Cuba for the department of geology, also collected a number of recent animals of considerable interest. A continuation of the biologic and hydrographic survey of Chesapeake Bay by the Bureau of Fisheries steamer *Fish Hawk*, on which the Museum was represented

by Mr. William B. Marshall, was productive of about 2,000 specimens of miscellaneous marine invertebrates.

Field investigations by the Carnegie Institution of Washington through which the collections were increased included an expedition by Dr. J. N. Rose to Venezuela during October and November, 1916, stops being made at the island of Curaçao both going and returning. In the study of the Cactacea, the special object of the trip, Dr. Rose obtained a large number of specimens, mainly of this group but including others and especially orchids. During August and September, 1916, Mr. Paul C. Standley spent four weeks at Ute Park, Colfax County, N. Mex., a locality in the southern extension of the Sangre de Cristo Range of Colorado, only a few miles south of the Colorado line, at an altitude of about 7,500 feet. The highest mountain in the vicinity is Baldy Peak, which rises to 12,490 feet, its top being well above the timber line and supporting an Arctic-Alpine vegetation. In the short time Mr. Standley was in this region he obtained about 5,000 specimens, including several genera of flowering plants new to the State. Special attention was devoted to the cryptogams, and his collection of these is by far the largest ever made in New Mexico. Nearly 100 rusts were secured and about 250 specimens of fleshy fungi, a group of which scarcely more than a dozen species have been reported from there. Probably more than 300 species of fungi were added to the known flora of the State.

From June to November, 1916, Mr. A. S. Hitchcock, systematic agrostologist of the Department of Agriculture and custodian of the section of grasses in the Museum, traveled in the Hawaiian Islands studying and collecting plants, assisted by his son, Mr. A. E. Hitchcock. The islands visited were Kauai, Oahu, Lanai, Molokai, Maui and Hawaii, and among the most interesting localities examined were the bogs at the top of some of the high mountains, especially that of Kauai which covers several square miles. Approximately 2,000 numbers were obtained, of which a complete set has been transferred to the Museum. Particular attention was given to the ferns and grasses, a large quantity of the latter being collected for future distribution in the Exsiccatae, which are being prepared under Mr. Hitchcock's supervision.

An expedition to the Congo region in Africa was organized in the fall of 1916 by the Smithsonian Institution in conjunction with Mr. Alfred M. Collins, of Philadelphia, as chief, and Mr. R. L. Garner, of New York, as manager, Mr. C. R. W. Aschemeier, of the preparator staff of the Museum, being detailed as natural history collector. One of its principal objects is to secure specimens of anthropoid apes for the Museum. Messrs. Garner and Aschemeier left New York for Bordeaux in December, 1917, and in due season reached Fernan Vaz, in French Congo, where active collecting has been begun. According

to the latest advices, good progress is being made, and the prospects of carrying the work to a successful issue are excellent.

DEPARTMENT OF GEOLOGY.

The department received 188 accessions, with an estimated total of 32,990 specimens, of which 5,278 were loans or deposits, classified and distributed as follows: Division of systematic and applied geology, 1,500 specimens; division of mineralogy and petrology, 8,300 specimens; division of paleontology, section of invertebrate paleontology, 22,300 specimens; section of vertebrate paleontology, 802 specimens; section of paleobotany, 88 specimens. There were also received from various sources for examination and report to the senders 463 lots of specimens of rocks or supposed mineral-bearing material and 40 lots of fossils, of which only about 15 proved to be of any special interest.

Systematic and applied geology.—As in the previous year, the department was especially fortunate in the acquisition of meteoric material. One accession valued above all others and without parallel in the history of the department consisted of the well-known Shepard collection, bequeathed to the Museum by the late Dr. Charles U. Shepard, of Summerville, S. C., as announced in the last report. Assembled principally by Prof. Charles Upham Shepard, long since deceased, it was added to by the son, and, at the time of the bequest it constituted the most valuable private collection in the United States. Left as a memorial of his father's labors, it was accompanied by all books, pamphlets and letters relating to it. For some years on deposit in the Museum, it is listed in the several catalogues of the meteoric collection, the last of which was published in 1916.

The bequest comprises 238 falls and finds, 98 of which were previously unrepresented in the permanent Museum collection. Of particular interest are a 1,090-gram mass of the Bishopville, S. C., stone, a rare type of which but four representatives are known; a 50,340-gram mass, practically the entire residual amount from a 117-pound iron found at Dalton, Ga., which has been the subject of a special investigation by the head curator; 511 out of a total known fall of 789 grams of a stone which fell at Gargantillo, Mexico, in 1879, and is now being redescribed; 2,032 grams, nearly a third of all that is known, of an iron found at La Grange, Ky., in 1860; 2,820 grams, over three-fifths of an iron found in Lexington County, S. C., in 1881; over 3,300 grams from the New Concord, Ohio, fall of 1860; some 48 grams of the Rochester, Ind., stone, of which only 195 grams are known; a magnificent mass, weighing 5,461 grams, of an iron weighing some 53 kilograms, found on Ruff's Mountain, S. C., in 1844, which will form the subject of an investigation now in progress; 1,937 grams of an iron found at Smithville, Tenn., in 1840;

1,662 grams of an iron found at Staunton, Va., in 1858; 1,943 grams of an iron found at Tazewell, Tenn., in 1853; 18,573 grams, including one large complete individual of the well-known Toluca, Mexico, iron; and many smaller but none the less interesting masses, representing early falls, and in several instances the actual material studied by Professors Shepard and Smith, and which therefore may be regarded as type specimens.

Second only to the above were gifts from Mr. C. S. Bement, of Philadelphia, through whose continued generosity were received a 170-gram slice of the iron of Charlotte, Dickson County, Tenn., of peculiar interest as being one of the ten meteoric irons actually seen to fall, and hence one of the highest priced of irons; two complete individuals, weighing respectively 2,527 and 2,940 grams, of the stones found at Plainview, Tex.; and a 1,477-gram slice of the iron of Nedjed, Arabia.

The meteoric collection was further much increased through exchanges. A 904-gram slice of the N'Goureyma iron; a 32-gram fragment of the Bath, S. Dak., stone; a 45-gram fragment of the Yensigahara, Japan, stone; a 76-gram fragment of the Marion, Linn County, Iowa, stone; and 7 grams of the stone which fell at Weston, Conn., in 1807, came from Ward's Natural Science Establishment, Rochester, N. Y. The following weights of stones and irons were acquired from the several sources mentioned, namely: From the Natural History Museum of the State of Illinois, Mordvinovka, Russia, 55 grams; Mern, Denmark, 21 grams; Buschof, Russia, 19 grams; Elbogen, Bohemia, 25 grams; Charlotte, Tenn., 8 grams; and Linnville, N. C., 15 grams. From the University of Illinois, Bridgewater, N. C., 32 grams; Fort Pierre, S. Dak., 38 grams; Menow, Germany, 108 grams; and Murphy, N. C., 576 grams. From the University of Minnesota, a 42-gram fragment of the Tourinnes-la-Grosse, Belgium, stone, and from the Field Museum of Natural History, a 382-gram slice of the Los Reyes, Mexico, iron. Small individuals of the Holbrook, Ariz., fall of 1912, aggregating 3,000 grams in weight; a specimen of the Plainview, Tex., stone, weighing 4,592 grams; and one complete individual and a cut slice of the well-known Cañon Diablo irons, were obtained from Howell's Microcosm.

Mr. John W. McBurney, of Washington, deposited a fine large example, weighing 21½ pounds, of the New Concord, Ohio, stone; and Mrs. Coonley-Ward presented a cast of an iron meteorite found in 1900 near Boogaldi, New South Wales.

Among accessions of an economic character may be mentioned several valuable samples of the ores of the steel-hardening elements, tungsten and vanadium, including a magnificent 1,500-pound mass of ferberite ore from Colorado, a gift from the Vasco Mining Co. and

Messrs. Stevens and Holland, Lessees, of Boulder, Colo., at the request of Mr. F. L. Hess; a case exhibition specimen of hübnerite in quartz, obtained by purchase; and a large quantity of choice patronite and associated vanadium minerals from Peru, collected and presented by Mr. D. F. Hewett, of the Geological Survey. A cleavage fragment of an unusually large crystal, 34 by 46 inches, of Canadian phlogopite mica, was contributed by Mr. M. F. Westover, of Schenectady, N. Y. Mr. Victor C. Heikes, of the Geological Survey, presented and was instrumental in securing for the Museum as gifts a variety of exhibition and study specimens of western ores, mostly zinc from Utah, but including some manganese, copper, carnotite and tungsten from Utah, Nevada and Idaho. The donors were the Cedar Talisman Co., Mr. Frank Williams, Mr. S. S. Arentz, Mr. E. R. Pembroke, Mr. W. H. Parker, Messrs. Custer and Palmer, and Hon. Thomas Kearns, all of Salt Lake City.

Also deserving of notice here are a suite of scheelite ores from the property of the Nevada Scheelite Co. in Utah, and a collection of pegmatite from the Rutherford mica mine, Amelia, Va., obtained by Dr. W. T. Schaller, and transferred by the Geological Survey; a study series of rocks, minerals and ores from New South Wales, received in exchange from the Department of Mines, Sydney; and an interesting lot of molybdenum ore, gift of the Primos Chemical Co., Boulder, Colo.

All unfinished items in the arrangement of the Tenth Census collection of ores of the precious and minor metals, reported as in progress last year, were completed. This comprised cataloguing, renumbering and labeling. Stored for a long period, the material now occupies 73 standard drawers, and is for the first time readily accessible for reference. In view of the historical value of this extensive collection, it is believed that the amount of labor expended upon it was justified. The Tenth Census iron ores, filling 75 standard drawers, were also put in order, the primary arrangement being by states, and the secondary by Museum catalogue numbers. The entire study series of metallic ores, occupying 22 standard storage cases, was gone over; the duplicates were eliminated, the drawer arrangement and card catalogue perfected, and a general relabeling was begun. All the non-metallic ores were assembled in one series, in 8 cases, and listed for card cataloguing; the arrangement was practically completed, but the catalogue only partially so. The work on these collections is of considerable magnitude as well as importance. They occupy the equivalent of some 540 standard drawers, and this is the first thorough overhauling they have had since their removal from the older building.

About 5,000 hand specimens of rocks and ores have been prepared and reserved for school duplicates, but many of the common rocks

and minerals are still needed for adequately rounding out the sets. Incidental to this work, all the remaining duplicate rocks were incorporated into one systematic series, a much needed improvement that will greatly facilitate the finding of specimens for exchange or other purposes.

The head curator of the department, Dr. George P. Merrill, devoted a large amount of time to the subject of meteorites, this being made desirable by the acquisition of the Shepard collection and other recent additions. Both collections have been gone over with care, labels and weights verified or corrected, and incidentally new descriptions prepared. In two instances it was found necessary to completely redescribe, as specimens from independent falls had in each case been included under one. Other redescriptions have also been found essential and have been or are being made. Work on the meteorite collections under a grant from the National Academy was continued.

Mineralogy and petrology.—The more important accessions of minerals were by transfer from the Geological Survey, as follows: Several hundred specimens, including a fine series illustrating the occurrence of turquoise, a number of amethyst crystals from all parts of the country, and many semi-precious stones, assembled by Dr. D. B. Sterrett in the course of his work on the precious stones of the United States. A large number of minerals and rocks, collected by Dr. W. T. Schaller in connection with his studies of the gem deposits of southern California, forming a very important addition to both the exhibition and study series. Of type material there were several species described by Mr. E. S. Larsen and associates, 5 minerals from Colorado and vegasite from Nevada.

By exchange with the Natural History Museum of the State of Illinois, a number of good exhibition specimens and several rare minerals not heretofore represented in the Museum were acquired. Mr. M. L. Glenn, of Erie, Pa., contributed 5 specimens of stevensite and associated minerals from Essex County, N. J., representing the type specimens of a redescription of this species; and 2 additional specimens of the same mineral were presented by Mr. J. G. Manchester, of New York. Through the Geological Survey, type specimens of the mineral creedite were obtained, recorded in the name of R. I. Fisher, Wagon Wheel Gap, Colo.

In connection with studies of the zeolite deposits and associated glauberite casts found in northern New Jersey, now being conducted by Dr. W. T. Schaller and Dr. Edgar T. Wherry, assistant curator, the division received from the Geological Survey a series illustrating the genesis of the zeolites. Very interesting specimens showing the association of glauberite cavities with the zeolites were presented by Col. Washington A. Roebling, of Trenton, N. J., and later supple-

mented by a remarkable specimen of glendonite from Australia. Six specimens similar to the preceding were purchased; 13 specimens of the same minerals were received in exchange from Mr. Louis Reamer, of Short Hills, N. J.; and 2 particularly instructive specimens of quartz pseudomorphs after glauberite were donated by Mr. J. G. Manchester, of New York.

Twenty-two specimens of showy and rare minerals were obtained in exchange from Ward's Natural Science Establishment. Through the intercession of Mr. Victor C. Heikes, an exceptionally large crystal of iron pyrite was presented by Mr. G. D. Blood, of Salt Lake City, Utah, and a fine specimen of crystallized anglesite by Mr. Imer Pett, of the same place. Upward of 100 pounds of geodes were collected by Dr. Wherry at the well known locality at Warsaw, Ill., and between two and three hundred pounds of cassiterite and wolframite at Hill City, S. Dak.

The accessions in petrology consisted largely of materials transferred by the Geological Survey, and included rocks and ores illustrating the geology of Gilpin and adjacent portions of Clear Creek and Boulder Counties, Colo.; the southern Nevada escarpment and the Inyo Range, Cal.; the Yerington District, Nev.; the Santa Rita and Patagonia Mountains, Ariz.; and the Rochester District, Nev.

It may be noted here that the extensive collection of minerals and gems, numbering over 5,000 specimens, belonging to the late Dr. Charles U. Shepard and mentioned in paragraph 19 of his will, quoted on page 130 of the last report, has been allowed by the executors and trustees under the will to remain on deposit in the Museum until such time as its final disposition may be determined. The Museum, which has had the collection for many years, is a conditional legatee.

The catalogue of the Isaac Lea gem collection, begun during the previous year and noted in the last report, received the active attention of Dr. Wherry, and was practically completed. The lists of gems were entirely rearranged, the majority of those in the collection remeasured and reweighed, and new descriptions and determinative tables written, so that the new catalogue will differ entirely from the old one. The frequent requests for literature on this subject indicate that there will be considerable demand for this work, the early publication of which is expected. A study of the mineral glauberite and its occurrence, also commenced the previous year, was continued by Dr. Wherry and an additional paper upon it published.

A blue mineral sent to the Museum for examination and report proved to represent a new occurrence of the rare mineral miloschite and was studied in collaboration with Prof. Glenn V. Brown. Dr. Wherry also made a study of soils, samples of which he had collected the previous year, the problem in mind being the origin of a soil

found in cavities in non-calcareous rocks. A series of analyses was made and a paper describing the results was published in the Journal of the Washington Academy of Sciences. In collaboration with Mr. E. S. Larsen, of the Geological Survey, he likewise investigated the relations between the optical properties and chemical compositions of the minerals halloysite, leverrierite, rhodochrosite and siderite; and, for the division of physical anthropology, he devoted several weeks to the analysis of fossil bones from Vero, Fla.

Invertebrate paleontology.—The most important additions were of type specimens. A collection of Silurian fossils, transferred by the Geological Survey, formed the basis of papers illustrating the geology and paleontology of Maine, and are of special value on account of the rarity of fossils in that area and of their relation to European Silurian species. Fifteen specimens representing the types of 9 species of Paleozoic crinoids were presented by Mr. Frank Springer, and 9 specimens of very rare fossil insects from the Tertiary rocks of Colorado, described by Prof. T. D. A. Cockerell, were received in exchange from Ward's Natural Science Establishment. Other desirable acquisitions, both obtained through exchange, were a collection representing several hundred species of European invertebrate fossils, from Mr. W. E. Crane, of Washington, who, at the outbreak of the war had just completed a long collecting trip through Europe; and about 2,000 examples of well-preserved free specimens of Lower Ordovician fossils from the zinc mines of Arkansas, including valuable material both for exhibition and for study, from Mr. T. H. Aldrich, of Birmingham, Ala.

Two hundred large masses of fossil corals and 20 of fossil algae were collected for exhibition purposes by the curator of paleontology, Dr. R. S. Bassler; and 350 specimens of marine fossils, found in the Pleistocene deposits of Vero, Fla., of special interest on account of their bearing on the age of the associated human remains, were presented by the Geological Department of Florida, through Dr. E. H. Sellards, State geologist.

In addition to supervising the installation of the various exhibits, the curator's work on the collections resulted in the preparation and classification of all the Appalachian Upper Ordovician fossils, many of which will become types in forthcoming publications. The assistant curator accomplished the same for the duplicate Cambrian fossils transferred by Secretary Walcott in past years, and spent much time in the preparation and arrangement of the very large Williams collection of Devonian fossils transferred by the Geological Survey in 1914, which will require another year or more for placing in final museum form. Dr. E. O. Ulrich's assistants and the division preparator continued the labeling and registering of material throughout the Paleozoic collection, the constant additions to which

make this work almost continuous. Mr. T. E. Williard completed the locality registration and labeling of all the collections from the Mesozoic faunas. The acquisition of much needed cases will permit the segregation of the entire series of Cenozoic stratigraphic collections and their arrangement in much more convenient shape for reference. The continued assistance of Mr. W. E. Crane, an experienced collector and student of fossils, has added much to the value of the collections, especially in the identification and arrangement of the foreign material.

Secretary Charles D. Walcott's studies on trilobites, especially the *Ptychoparia*, were continued, and incidentally those of the *Albertella* fauna and the Mount Whyte formation, in which other forms, notably brachiopods and crinoids, were included. A paper on the "Nomenclature of some Cambrian Cordilleran formations" was also prepared. Mr. Frank Springer, associate in paleontology, completed his monograph on the crinoid genus *Scyphocrinus*, which will be published by the Smithsonian Institution, and brought nearly to conclusion his work on the monograph of the *Crinoidea flexibilia*. Dr. Ulrich and Dr. Bassler finished their joint monograph on the Silurian Ostracoda, which is in course of publication by the Maryland Geological Survey. Dr. Ulrich also completed a paper of considerable length dealing with the stratigraphy and paleontology of the upper Mississippian rocks of the Ohio Valley, based upon the very extensive collections in the National Museum. It will be published by the Geological Survey of Kentucky.

Dr. Bassler, in collaboration with Mr. Ferdinand Canu, of Versailles, France, was enabled to submit to the U. S. Geological Survey the text and illustrations of their monograph on the Early Tertiary Cheilostome Bryozoa of America. This paper consists of about 1,000 pages of text, 102 quarto plates, and 300 text figures, describing and illustrating about 500 species, all the types being in the National Museum collection. The same authors have also nearly ready a second monograph on the American Early Tertiary Cyclostome Bryozoa, which is likewise to be published by the Geological Survey. Dr. C. E. Resser, assistant curator, completed his bibliographic index of American Cambrian fossils, but its publication, which will be undertaken by the Geological Survey, is delayed in order to incorporate the results of certain studies on the Cambrian faunas now in progress by Secretary Walcott.

Dr. T. W. Stanton, custodian of the Mesozoic collection, has in preparation a description of the invertebrate fauna of the Cannonball marine member of the Lance formation, and reports the near completion of a comprehensive study of American Jurassic ammonites belonging to the family Cardioceratidae, by Dr. J. B. Reeside, jr., of the Geological Survey. Miss Mary J. Rathbun,

associate in zoology, studied a collection of Tertiary fossil crabs and shrimps procured in Santo Domingo by an expedition under Dr. Carlotta J. Maury, of Cornell University, and the results will be incorporated in a report on West Indian fossil Crustacea obtained by Dr. T. W. Vaughan and others, to be published by the Carnegie Institution of Washington. Miss Rathbun also described a Pliocene fossil crab discovered during excavations for the foundation of a large building in Los Angeles, Cal., and made preliminary identifications for Dr. L. W. Stephenson, of the Geological Survey, of Cretaceous fossil crabs and shrimps from the Coastal Plain investigations in Mississippi and Texas.

Dr. William H. Dall, associate curator of the Cenozoic collection, reports that he has completed studies on a collection of fossils from the Galapagos Islands for the California Academy of Sciences; on fossils from the Arctic coast of America collected by the Canadian Arctic expedition under Stefanson, submitted by the Canadian Geological Survey; and on a collection from the Alaska Arctic coast and the Nome district made by members of the U. S. Geological Survey in recent years and by Mr. Leffingwell. Considerable progress has been made in the preparation of a card catalogue of American Tertiary fossils, which it is intended to keep up to date as future publications are received. A check list of the recent and quaternary species from the northwest coast of American Arctic seas to San Diego, Cal., comprising the bivalves, was transmitted for publication to the Southwest Museum of Los Angeles, Cal. The next part, covering the gastropods, is in an advanced state of preparation.

Dr. Vaughan gave as much of his time as possible to the collections of Tertiary corals. He completed a monograph of the Central American material in the Museum, including northern Colombia, Panama, Costa Rica, Nicaragua and Mexico; described all of the available specimens from Cuba and Porto Rico, and finished a monographic account of the fossil corals from the island of Haiti, besides describing a number of species from the Oligocene of Antigua and Anguilla, in the West Indies, and from the States of Georgia and Florida. The types of nearly all the species defined in these papers belong to the Museum.

Vertebrate paleontology.—In a collection of Permian vertebrates from Baylor County, Tex., obtained by purchase, the most noteworthy specimen consists of the greater part of a skeleton of the large fin-backed reptile *Dimetrodon*, which is complete enough to mount for exhibition. Besides three other less perfect skeletons of the same genus, this accession also furnished from one to eight skulls each, generally with partial skeletons, of *Cardiocephalus*, *Lyosorophus*, *Diplocaulus*, *Seymouria*, *Labidosaurus* and *Parioticus*, as well

as a great number of jaws, bones, etc., of small reptiles and batrachians not yet identified. Many of these will likewise be suitable for exhibition, and the collection undoubtedly contains some new forms, which, when described, will add materially to its scientific value. Also acquired by purchase were a skull, including the lower jaws, of a fossil horse from the Pleistocene gravels of the Yukon Territory, which has been described by Dr. O. P. Hay as the type of a new species, and a portion of a skull of a fossil musk-ox, *Simbos cavifrons*, from the Pleistocene of Miami County, Ind.

About 400 specimens of small mammalian remains of rare forms from cave deposits in the mountains of western Cuba were collected for the Museum by Mr. William Palmer. Goucher College, Baltimore, Md., deposited a collection of fossil reptile and cetacean remains, including a number of type-specimens, thus bringing together in the National Museum practically all of the known vertebrate material from the Arundel formation of Maryland. A considerable part of the skeleton of an extinct bird, the rarest of all fossil vertebrates, probably representing an undescribed species, was transferred by the Geological Survey.

The most important work of the year on the reptilian collections, under the care of assistant curator, Mr. Charles W. Gilmore, was the assembling, restoring and mounting for exhibition of a composite skeleton of *Stegosaurus stenops*. This skeleton is made up of the bones of several individuals, all from the same fossil deposit, representing animals of approximately the same size and proportions. The mounting was done by Mr. Thomas Horne, assisted by Mr. Norman Boss and Mr. Louis Goldberg, and is to be highly commended for the excellence of the work and the ingenuity displayed in making the supporting iron work so inconspicuous. The latter were also engaged for a considerable part of the year in cleaning and restoring a collection of fossil reptiles obtained by one of the Geological Survey parties, working under the direction of Mr. J. B. Reeside, jr., in the San Juan Basin of New Mexico. It consists of the carapaces of no less than 30 turtles, besides a large number of dinosaur bones in a good state of preservation. Many of the turtles are being prepared with a view to their exhibition. Much work was likewise done on other material sent in by members of the Geological Survey for examination and report, some of it proving to be valuable for addition to the collections. The preparation of the carnivorous dinosaur material was continued, three boxes and two dozen trays from storage having been worked over. There yet remain of the original Marsh collection 57 boxes, all containing reptilian fossils from the Cañon City, Colo., locality.

Mr. James W. Gidley, assistant curator of fossil mammals, reports that the cleaning of mammal material from boxes in storage pro-

gressed beyond expectations, the last lot having been completed before the middle of May. With the exception of "mammal sand" from the Lance formation of Converse County, Wyo., they contained titanothere remains, including several good skulls and lower jaws. These, added to those previously prepared, give to the Museum by far the best collection in existence of this important and interesting group of extinct mammals. Mr. Horne finished the mounting of the skeleton of *Sinopa grangeri*, a small and rare creodont from the Bridger Eocene, and prepared and partly mounted a collection of Pleistocene fossils from Siberia, obtained by Mr. Benno Alexander while with the Koren expedition. Mr. Gidley advanced the preparation of the Fort Union mammal material, adding over 400 cleaned specimens, including the more important part of the collection, to the study series.

Mr. Gilmore continued his monographic work based on the carnivorous dinosaur material in the collections, which he expects to complete during the current year. Manuscript describing the turtle and dinosaur remains from New Mexico, being prepared at the request of the Geological Survey, is well under way, while a paper for the Carnegie Museum of Pittsburgh, entitled "The fossil turtles of the Uinta formation," based largely on a collection belonging to that institution, was finished.

Mr. Gidley continued his collaboration with Mr. Gerrit S. Miller, jr., on the revision of the Rodentia. His paper on the creodont genus *Claenodon*, reported last year as completed, was withdrawn for revision owing to the discovery of new material throwing additional light on several of the important problems involved.

Paleobotany.—A fine, large fossil tree stump with a portion of the rock attached, from a coal mine at Lookout, Pike County, Ky., was presented by the Marrowbone Mining Co., of Cincinnati, Ohio. This specimen, preserved in sandstone, from the bituminous series of the Coal Measures, makes a fitting companion piece to a large *Lepidodendron* stump, preserved in shale, from the anthracite series, previously on exhibition. Seventy-five fossil cycad trunks, many of which are type specimens, while others are such large and striking objects that they have been placed on exhibition, were deposited by Goucher College, of Baltimore, Md.

Nine large specimens of calcareous algae from the Permian rocks of Kansas, forming a unique exhibit of these low forms of plant life, were contributed by Mr. Wallace Lee, of Tulsa, Okla., and a specimen of the alga *Stromatocerium rugosum*, from the Ordovician rocks of Kentucky, a gift from the University of Kentucky, proved also to be interesting for the same purpose, on account of its size, excellent preservation and unusual structure. The latter has been figured in a report of the Geological Survey of Kentucky.

Being without an aid from September until May, much less than the customary amount of routine work on the collections could be accomplished. In the latter month the preparation of labels thought to be more suited to visitors than the strictly scientific forms heretofore in use was begun. Another important work completed was the substitution in the drawer or study series of non-inflammable seaweed matting for the cotton formerly in use, and the entire collection is now in as fire-proof condition as it can well be made. This series extends to several thousand drawers.

Dr. F. H. Knowlton, custodian of Mesozoic plants, continued his studies on the Mesozoic and Cenozoic plants. He completed for publication by the Geological Survey a manuscript of about 800 pages on the flora of the Laramie formation, including a history of the so-called Laramie problem, and an account of the Laramie flora of the Denver Basin of Colorado, and also a catalogue of the Mesozoic and Cenozoic plants of North America, embracing floral lists for each formation or horizon, a biologic classification of genera, and a correlation chart of the plant-bearing formations. He is now engaged in a study of the flora of the Denver formation, which is about half completed and will form a companion volume to the Laramie flora.

Exhibition collections.—An entire alcove on the first floor has been given over to the exhibition of the varied and instructive collection from the Yellowstone National Park made during the summer of 1915 by Secretary Walcott and his party. Incorporated with it in part is the older Geological Survey collection, while 10 transparencies of Yellowstone Park views and a relief map 6 feet square add to the general interest of the display.

Incidental to the transfer to the division of paleontology of the exhibit showing the geology of a coral island, the systematic exhibits of dikes, veins, folds and faults, and that of the District of Columbia minerals and rocks were reclassified. The old Leadville, Colo., exhibit, supplemented with two relief maps showing areal and structural geology, as also several renovated relief maps, were reinstalled. Various large and choice specimens, recently received, have been suitably placed in the hall of economic geology. They include a crystal of Canadian phlogopite mica, measuring 34 by 46 inches, framed as a wall specimen, and a section from it mounted as a transparency; masses of Colorado tungsten ore, an entire case of Peruvian vanadium ore, and 2 fine matched slabs of Alaska marble, each about 4 by 12 feet.

The entire series of meteoric irons was removed from the wall case and temporarily installed in a series of seven slope cases down the middle of the hall, pending the construction of cases of more appropriate design.

A series illustrating the granite pegmatites and their associated minerals, displayed in two American cases in the hall containing the petrological collections, forms an important addition to the exhibition collections. One case is devoted to the occurrence of gem tourmaline and other minerals from southern California, and was prepared in collaboration with Dr. W. T. Schaller, honorary custodian, who collected most of the specimens; the other contains material of like nature from the Appalachian and southern parts of the country, including a large series from Maine. These collections are quite unusual, containing not merely the characteristic rocks, but samples of the decomposed material found in pockets, and their included gem materials, kunzite and tourmaline. They are arranged to show the material as found and as assorted, giving the proportional amount of gem to decomposed matter, and illustrating in a very instructive way the mode of occurrence of these important minerals and their occasional associates of the rare earth groups.

In the course of the preparation of the revised catalogue of the Isaac Lea gem collection, the manuscript of which was finished just before the close of the year, the specimens were all examined, cleaned and to some extent rearranged.

A fossil coral reef designed to illustrate not merely the occurrence of fossil corals, but also their occasional arrangement in reefs, was mounted in an alcove in the hall of invertebrate paleontology. As a companion exhibit, the collection illustrating the geology of a coral island was transferred from the physical geology collection.

A striking and valuable addition to the exhibits in the vertebrate hall has been made in an erect mount of a composite skeleton of *Stegosaurus stenops*, at this time the only mount of the genus in any museum. It is considered a very accurate conception of the animal and constitutes, together with the type skeleton previously installed and the life-sized restoration, a display of Stegosaurian remains without parallel. A skull of *Allosaurus fragilis*, a skeleton of a creodont, *Sinopa grangeri*, and a part of the collection of Pleistocene fossils from Siberia, obtained on the Koren expedition, were also installed.

A large fossil tree stump preserved in sandstone, from the Coal Measures of Kentucky, was mounted temporarily at the end of the paleobotanic hall as a companion piece to a similar stump preserved in shale. Of two exhibits of fossil algae, one, showing a range in age from the pre-Cambrian to the end of the Paleozoic, is displayed in two upright cases, while the second, consisting of very large examples illustrating their occurrence in nature in the form of fossil reefs, was mounted on bases so that the specimens can be approached and examined closely.

Explorations.—The summer and early fall of 1916 was spent by Secretary Walcott with a small party on the Continental Divide be-

tween Alberta and British Columbia, south of the Canadian Pacific Railway. Although the weather conditions were unfavorable for geological investigations, sections were examined and measured from the Mount Assiniboine region southwest of Banff, Alberta, northwest to the Kicking Horse Pass, where the Canadian Pacific Railway has bored a double loop through the mountains on the north and south sides of the Pass. The season's work was undertaken with two principal objects in view, namely, to determine if possible the base line of demarcation between the Lower and Middle Cambrian, and to locate the exact horizon of a Cambrian subfauna that has in its entirety been found only in drift boulders in the Kicking Horse Valley, east of Wapta Lake. About 1,000 pounds of Cambrian material were collected and shipped to the Smithsonian Institution, and many exceptionally fine photographs were made. An important incidental result of the expedition was the discovery at Wonder Pass of a great overthrust fault by which the basal Cambrian rocks forming the mountains on the west side of the Pass have been thrust eastward over upon the limestones of the Devonian, shown in the slope on the east side of the Pass. The thrust along this fault has carried the rocks forming the main range of the Rockies in this area several miles to the eastward. The line of demarcation between the Lower and Middle Cambrian was found to be high up in the section on the face of the cliffs at Wonder Pass, and throughout the Assiniboine massif. Important additions were made to the fauna of the Mount Whyte formation.

In April and May, 1917, Dr. Wherry, who visited the middle west in connection with other interests, made collections for the Museum at several mineral localities along his route. Only a part of the material obtained had reached Washington at the close of the year, but it included geodes from Warsaw, Ill.; wolframite in matrix and rock-carrying cassiterite from Hill City, S. Dak.; amblygonite and spodumene and a number of rare minerals from the region around Keystone, S. Dak.; sphalerite and associated minerals and brecciated chert from the new zinc district at Picher, Okla.; and apatite and hematite from Iron Mountain, Mo. In this collecting, the needs of the Museum for both showy exhibition material and duplicates for school collections were considered, and good representations for both purposes were obtained.

Late in June, 1916, Dr. Bassler and Dr. Resser were detailed to collect exhibition and study specimens. Their joint work was limited to the Middle and Upper Ordovician rocks of the Appalachian Valley, after which Dr. Bassler spent some weeks in the Ohio Valley, particularly in the Blue Grass region of Kentucky, for the purpose of securing large specimens illustrating fossil coral and algal reefs. He was successful in quarrying out a coral reef at a

locality near Louisville, Ky., and in the vicinity of Lexington he obtained large specimens of fossil algae. The month of June, 1917, was similarly occupied, but the work was begun too late in the year for the results to be incorporated in this report.

Explorations in search of fossil echinoderms were carried on, as usual, by Mr. Frank Springer. They were concentrated on the Silurian rocks of Indiana, where his assistant, Mr. H. E. Wilson, remained for several months, securing a considerable number of valuable crinoids. Mr. William Palmer was detailed to visit certain cave deposits in the mountains of western Cuba, in which he succeeded in obtaining about 400 specimens of small Pleistocene mammalian remains. Mr. D. F. Hewett, while engaged in private work in Peru, generously interested himself in securing a large and valuable series of vanadium compounds.

ARTS AND INDUSTRIES.

Textiles, woods, medicines, etc.—Of the several branches dealing with the utilization of organic products, administered under the supervision of the curator of textiles, Mr. Frederick L. Lewton, the division of textiles, having the curator's closest attention, has naturally shown much the greatest advancement. For the division of medicine and the section of wood technology it has been difficult to secure and impossible to retain for more than brief periods the necessary expert assistance at the salaries which can now be offered. Despite these unfavorable circumstances, however, considerable progress is to be noted in respect to these subjects, which should, as soon as possible, be given opportunity for fullest development in consonance with their importance.

Of textiles there were 64 accessions, with 933 items; of wood technology, 12 accessions, with 241 items, and of medicines and other subjects, 10 accessions, with 113 items.

The largest group of textile specimens was a collection of 158 items, showing the most important types of cotton threads and the various ways in which they are wound and put up for family and factory use. Received as a gift from the American Thread Co., of New York, it supplements the extensive series of models, machine parts and photographs, illustrating the manufacture of cotton thread, contributed by this corporation the previous year. From the same source were also obtained 6 beautiful examples of tatting, crochet, embroidery and cut work, in white and colors, suggesting practical and artistic uses for certain types of thread contained in the collection.

The display of skein-dyed silks for comparison with piece-dyed and printed silks was rendered possible through the accession of 14 samples of Scotch plaid tie silks and 54 small samples of surah silk

representing the plaids of different Scottish clans, the gift of James McCurrach & Bro., of New York City, where they were made. The Messrs. Cheney Bros., of South Manchester, Conn., added to their previous generous contributions 9 samples of novelty dress silk fabrics, printed in Egyptian, Persian, Chinese, Japanese and floral designs. To Messrs. Loewenstein, Weiller & Co., of New York, the Museum is indebted for 16 samples of piece-dyed cotton, and silk and cotton dress goods, the latter showing weft figures of tussah silk on silk and cotton grounds. Messrs. Ludlum & Carland, of New York, presented 9 examples of wash silk fabrics, comprising crêpe weaves for waists and underwear. Samples of novelty silks, "Armure Rousseau" and "Satin Elizabeth," were contributed by R. & H. Simon Co., of Union Hill, N. J.; while from Messrs. Naday & Fleischer, of New York, were received two examples of novelty silk dress goods, "Givrette," a lustrous taffeta fabric woven with warp of reeled silk and filling of artificial silk, in a 2-color effect. Of novelty sport silks, the Rockland Silk Co., Inc., of New York, added 6 very striking and attractive specimens to the rapidly growing silk section.

Acknowledgments are again due to the Amoskeag Manufacturing Co., of Manchester, N. H., for specimens of cotton and wool fabrics, supplementing the extensive series already presented by this firm. They include new patterns of the well-known domestic goods now being used in enormous quantities by Red Cross hospitals at the war fronts in caring for the sick and wounded. Excellent examples of cool fabrics for women's wear were added through the gift of samples of cotton and mohair and cotton and alpaca dress goods from Messrs. Lesher, Whitman & Co., Inc., of New York, and of samples of a patented mixed-fiber skirting, woven with cotton warp and a filling of alternate threads of mohair and silk, from the American Woolen Co., of Boston, Mass. The beautiful lustre and resiliency of mohair renders it especially adapted to the manufacture of pile fabrics for drapery and upholstery use, and for fabrics woven in imitation of furs. To Messrs. L. C. Chase & Co., of New York, the Museum is indebted for many beautiful examples of these fabrics, including plain and figured plushes, with the pile in cut and uncut or "friese" effects, fur fabric cloakings and trimmings, and automobile rugs. Perhaps the most instructive specimens included in this gift are those illustrating steps in the production of the pile surface and the development of artistic patterns by leaving uncut certain portions of the looped pile surface. These goods were made in Sanford, Me., by the Sanford Mills.

The Taylor-Friedsam Co., of New York, added to the material presented the previous year, 41 samples of silk ribbons manufac-

tured by the company in Paterson, N. J. They have been arranged in two series to show, first, the standard types of ribbons now generally used, such as plain, moiré and satin-faced taffeta, double-faced satin, plain, moiré and brocaded grosgrain, satin weave, serge weave and armure weave underwear ribbon, and fine and heavy faille watch fob ribbon; and, second, fancy or novelty ribbons, including warp-printed taffetas, striped grosgrain, corded bayadere, and grosgrain jacquards. The ribbon collection was further increased by the gift from Messrs. Johnson, Cowdin & Co., of New York, of 13 specimens of novelty silk ribbons, also made in Paterson. These include warp-printed and plaid taffetas, and brocaded satins, surahs, grosgrains, failles, and ottomans. Indian, Aztec, Chinese, and Byzantine motifs are included in the designs used in the decoration of these beautiful and striking examples.

The interest aroused in the production of fabric gloves by reason of the shortage of certain types of leather has resulted in the production in this country of a glove cloth formerly only made in Germany. Thanks are due to the Suedetex Glove Co., Inc., of New York, for 3 specimens of "Suedetex" glove cloth and 3 pairs of women's gloves made from this material. From the Philadelphia Commercial Museum there were received as a gift 22 specimens of silk, cotton, and raffia fabrics from the colonies of Annam, Cambodia, Madagascar, and Chandarnagar, French India. They are excellent examples of native industry.

That the blind can be taught a number of handicrafts and be successful in turning out many beautiful and useful articles is shown by an exhibit presented by the New York Association for the Blind. The articles comprise woven scarfs, pillow tops, hand bags, rag rugs, several kinds of baskets, and a taboret constructed of peeled rattan, all made by blind workers trained at "Lighthouse" No. 1, in New York City.

There was added to the interesting series of textiles ornamented by tied and dyed work, recently exhibited in the Museum, 2 beautiful specimens of this type of fabric decoration, designed and executed by Mr. J. P. S. Neligh, of Washington. One of these, a chiffon scarf, dyed in metallic greens, was the gift of Mr. Neligh; the other, a silk robe decorated in an elaborate pattern, was lent by Neighborhood House, the settlement headquarters in southeast Washington. Mrs. R. F. Giersch, of Raleigh, N. C., presented 2 excellent examples of coiled baskets, showing the use of pine needles; while Mr. H. M. Curran, of Laurel, Md., contributed 3 large pack baskets and a carrying net used by natives in the lowlands of the Magdalena River, Colombia, and a large bundle of the rattan palm stems used by the same people for making brooms. These articles were collected by Mr. Curran in the Department of Bolivar, Colombia.

To the collection of implements for preparing, spinning, twisting and weaving textile fibers were added a Saxony flax wheel, the gift of Mrs. Isabella C. King, of Washington; a spinning wheel, yarn reel, loom shuttle and pair of hand cards for wool, deposited by the Smithsonian Institution; and 6 implements for preparing flax, obtained by purchase. An old wooden rope machine, used by the grandfather of the donor for twisting bedcords and wash lines, was presented by Mr. H. L. Shaw, of Glen Rock, Pa. It is believed to be more than 150 years old and adds greatly to the interest of the exhibit of cordage and appliances. Through the kindness of Miss Katherine P. Crawford in lending a Norwegian tapestry loom and 2 squares of wool tapestry woven by her, an additional type of weaving is illustrated in the series of textile implements. Miss Crawford also lent a wooden swift of crude workmanship which she found in use in the mountains of North Carolina. From Mrs. Annie H. Eastman, Miss Francina M. Maxwell and Capt. W. J. Maxwell, U. S. Navy, the Museum likewise received as a loan a Chinese embroidery worktable with carved ivory fittings, suitable for carrying on the arts of the thread.

Illustrating household industry in the textile arts, the Museum received, as a gift from Dr. Carrie Harrison, of Brookland, D. C., a cotton appliqué quilt, pieced and quilted by a relative before 1859, and a blue and white plaid blanket, the material of which was raised, carded, dyed, and woven by the donor at the age of fourteen; as a gift from Mrs. May G. Covert, of Tetotum, Va., part of a blue and white, cotton and wool double-woven coverlet, woven by her grandfather; as a gift from Miss Marie Estelle de Ronceray, of Washington, 8 pieces of cotton patchwork quilts made by her grandmother between 1815 and 1820; and as a loan from Mrs. W. D. Sargent, of Somerset, Pa., 4 old hand-woven coverlets.

Among examples of foreign hand-worked textiles were an old Spanish silk shawl, obtained in Mexico by Mrs. G. Clyde Harding, of El Paso, Tex., and presented through Miss Mabel T. Harding, of Chicago, Ill.; a piece of Chinese embroidery done with silk and metal threads on wool-serge, lent by Mr. Ely Widler, of Chung King, China, through Mrs. David Fairchild, of Washington; and a hand-embroidered scarf, purchased by the donor in Weimar, Germany, the gift of Mrs. Charles E. Wright, of Washington.

Of the 12 accessions in the section of wood technology, the most valuable from a scientific point of view was a small addition, including 15 species accompanied by accurate data, to the collection of Argentine woods previously furnished by the Comision Argentina de la Exposicion Universal de San Francisco de California, 1915, through Mr. E. M. Nelson, vice-commissioner general. Two samples of ground quebracho wood, one sample of quebracho extract for use

in tanning, and 49 samples of sawdust from as many kinds of timber were also comprised in this gift. Through the generosity of the Armstrong Cork Co., of Pittsburgh, Pa., a most comprehensive and instructive cork exhibit was obtained, covering every phase of the industry from the raw bark of the cork oak, through several important processes of manufacture, to the many and important articles made from this substance.

A model of part of an idealized National Forest, on a scale of 1 inch to 25 feet and measuring 12 by 15 feet, was received by transfer from the Forest Service of the Department of Agriculture. Designed to show the various important uses of the National Forests and their administration, it is planned to make it the central feature of the court containing the wood collection. Another model representing a modern plant using creosote oil or zinc chloride or a combination of the two under pressure in the preservative treatment of railway timber, ties, poles and posts, was constructed in the Museum in cooperation with the American Wood-Preservers' Association. It is on a scale of ¼ inch to the foot and measures 8 by 17 feet. Also interesting in this connection were 10 samples of the various coal tar products employed in preserving wood, manufactured by the Barrett Co., of New York, from which they were received as a gift.

Through a cooperative arrangement between the Northern Hemlock and Hardwood Manufacturers Association, of Oshkosh, Wis., and the Bridgeport Wood Finishing Co., of New Milford, Conn., the Museum was presented with an instructive exhibit illustrative of wood finishing, showing 19 types of finish applied to 5 species of commercial timbers. To the study series of commercial timbers were added 49 specimens of Surinam woods purchased from Dr. J. A. Samuels, of Paramaribo, Dutch Guiana; and a specimen of Gabilan wood, *Engelhardtia oreamunoa*, obtained at a high altitude in Costa Rica, the gift of Mr. H. Pittier of the Department of Agriculture. An interesting collection of 37 walking sticks, turned from various woods purchased from natives of the Island of Marinduque, P. I., was lent by Rear Admiral Perry Garst, U. S. Navy. Mr. G. G. Harmon, of Mims, Fla., presented two sections of tree trunks showing nature's method of healing over decayed parts of the trunk; and Mr. William Bosworth, of Richmondale, Ohio, contributed a long chain carved from a single stick of black walnut.

The more important accessions other than textiles and woods were as follows: By transfer from the Department of Agriculture, 27 specimens of agricultural products exhibited by the Chinese Government at the Panama-Pacific International Exposition; from the Bureau of Chemistry of the same Department, a specimen of true chaulmugra oil seeds, produced by *Hydnocarpus kurzii*, much used

in the Orient in the treatment of leprosy; and from the Bureau of Plant Industry, an excellent sample of tung oil, expressed by Mr. L. P. Nemzek, a special technical representative of the Paint Manufacturers' Association of the United States, from Florida-grown seed of *Aleurites fordii*, supplied by the Department of Agriculture. The production of tung oil already promises to become an industry for the southern States, where many trees are now under cultivation. The oil has come into high esteem by reason of its waterproofing properties and the quick, hard-drying and elastic qualities which it imparts to varnishes and paints, the imports from abroad having amounted to as much as 5,000,000 gallons in one year. Balata in block and sheet form and a number of articles moulded from it were purchased. A sample of Indian gum, which is now finding many industrial uses, was contributed by the Casada Products Co., of Philadelphia, Pa. Seven generous specimens of tan barks, collected in Bahia, Brazil, by Mr. H. M. Curran and analyzed in the laboratory of the company, were received as a gift from the Elk Tanning Co., of Ridgway, Pa. Six sizes of empty gelatin capsules in various colors, and 5 photographs showing stages in their manufacture, were presented by Messrs. Eli Lilly & Co., of Indianapolis, Ind.

New textile exhibits installed during the year included illustrations of the manufacture of cotton thread, plain and mercerized cotton threads for factory and domestic use, tied and dyed work, ribbons, printed silk dress goods, skein-dyed tie silks, crêpes and mohair plushes. The space available for exhibition, however, is so limited that it has been necessary to temporarily remove and store much material in order to provide room for important recent accessions. The arrangement of the reference collection of named fabrics is progressing steadily, the samples being mounted on standard letter-size cards and filed in regular office filing cases.

In order to secure better and more ample facilities for the division of medicine, it has been arranged to transfer the exhibition series from the north to the south side of the gallery in the east hall, where it will be contiguous to a large room over the southeast court, in which the reserve and study collections will have space to grow. In fact, this change has already been partly made, the valuable collection having been moved to the court room, where it is being overhauled, and the placing of the exhibition cases being under way at the close of the year.

Progress has been made in the compilation of terms and definitions for the textile glossary, begun in 1913, which has already proven very useful in cataloguing new materials and supplying information in response to the many inquiries which reach the Museum. Assistance was rendered from time to time to several Government bureaus

and to numerous individuals in identifying specimens of fibers, fabrics, gums, resins and seeds. The curator, Mr. Lewton, determined the cottons introduced by the Office of Foreign Seed and Plant Introduction and Distribution of the Department of Agriculture, and aided the Bureau of the Census in preparing technical questions to be sent to silk manufacturers asking for statistical information. Bibliographical compilations on tortoise shell, the pearly and vegetable ivory button industry and on shellac manufacture were prepared on special request from several sources. The curator was also again detailed to assist the General Supply Committee in the preparation of specifications and the award of contracts for 1918. One trip, covering Philadelphia, Trenton, Newark and New York, was made by the curator for the purpose of studying the installation of industrial material and the securing of specimens for the Museum.

Material for research work was supplied to the Bureau of Chemistry, the Office of Home Economics and the Bureau of Plant Industry, Department of Agriculture; and to the Bureau of Fisheries, Department of Commerce.

Many groups of children from public and private schools in Washington and vicinity were given talks on the textile collections, and several classes from the National School of Domestic Arts and Sciences, of Washington, came to the Museum at regular intervals during the winter and spring months for lectures and demonstrations by the curator on the principles of spinning and weaving. The curator also lectured, with demonstrations, at the Museum to two classes of young ladies from the National Park Seminary, Forest Glen, Md., and to a section of the Twentieth Century Club.

Mineral technology.—The division of mineral technology received 21 accessions with a total of 126 items. While these figures are lower than those for the previous year, the aggregate value of the additions was distinctly greater. The principal acquisitions were as follows: A model of the Bingham Canyon Copper Property, donated by the Utah Copper Co., of Salt Lake City, Utah. The Bingham Canyon operations constitute probably the most significant mining achievement of the present generation, pointing the way, as they have, to the utilization of vast stores of lean copper ore of the so-called disseminated type which had hitherto been unobtainable. The operations are of a magnitude in full keeping with the vastness of their mountain setting, remote from the thoroughfares of civilization, and their faithful reproduction in a model measuring 16 by 19 feet is an impressive as well as worthy object of study. Moreover, society's indebtedness to the genius of the vast undertaking which served to unlock these great stores of so useful a metal as copper can scarcely be overestimated, and it is peculiarly fitting that the accomplishment should be represented in the National Museum. A model

showing the manufacture of white lead, being part of an exhibit under preparation for the past two years by the National Lead Co., of New York, as a gift to the Museum. A specimen exhibit representative of design and execution in cut glassware which has brought the distinction of preëminence to American handiwork in this field, the gift of T. G. Hawkes & Co., of Corning, N. Y., by whom it was specially made for the Museum. Several models visualizing the mode of occurrence, the recovery, and the preparation of tin, sulphur, asphalt, lime, and oil, prepared in the Museum during the year. A series of specimens exemplifying the properties and uses of asphalt, assembled and presented by the Barber Asphalt Paving Co., of Philadelphia.

The work of the division up to the present time, which has received the undivided attention of the curator, Mr. C. G. Gilbert, has consisted in planning and preparing exhibits calculated to convey an understanding of the various mineral resource industries and their relationship to human welfare. As soon as any one of these has developed to a degree where it can offer any significant conception, it is placed upon exhibition and added to from time to time. Thus the status of the division's custodianship is that of a series of systematically planned exhibits in every stage of development from incipiency to relative completeness. Each separate line of activity involves an extensive investigation into the technology and economics of the industry being treated as a prelude to adequate presentation, but progress has been very slow owing to the fact that, with insufficient funds, not more than two experts could at any time be attached to the division.

Current events, putting the adequacy of the American economic situation to test and showing up its weaknesses with the unfortunate consequences they entail, have brought the country face to face with eventualities which were to be foreseen and which all along had been the inspiration for the division's field of activities. The year has thus served to emphasize the importance of the work in hand rather than to suggest fundamental changes in the plans as set forth in earlier reports. In general, the prospect ahead consists in the continuance of effort long since undertaken and reported still lacking in full attainment because of the inadequacy of the facilities available. The measure of progress and the experience gained have, however, opened the way to certain extensions of activity and indicated the advisability of certain modifications in procedure worthy of mention.

Exhibits more or less fully representative, or at least covering some phase, of eighteen mineral resource types are now available to the public. None of these conveys a full expression of the nature of the resource and its bearing on human welfare through the medium of the industries it supports and the commodities it affords, the goal

set for it, or is likely to do so for some years unless greatly enlarged opportunities are furnished. Still many of them have reached a stage in their development where they have something of definite educational worth to contribute and it is proposed during the current year to begin the issue of educational bulletins calculated to convey the lessons intended into the schools and homes of the country. The eighteen topics which are at least touched upon in the Museum's halls are abrasives, asbestos, asphalt, coal, copper, glass, gold, graphite, iron, lead, lime, mica, petroleum, plaster, Portland cement, salt, sulphur and tin. Of these, abrasives, asbestos, asphalt, coal and coal products, copper, glass, graphite, lime, mica, petroleum, plaster, Portland cement and sulphur have been treated with sufficient fullness to warrant giving out published accounts of the exhibits and their meaning.

The various business and other interests operating toward the furtherance of the country's mineral resource development, in whatever capacity engaged, have been outspoken in approval and proffers of assistance, but the division has been able to avail itself only to the very limited extent of the advantages open. The time, however, is certain to come when a more general recognition of the value to be derived from the work of the division will result in at least a nearer approach to adequacy of facilities. Heretofore the work has been carried forward purely from within the division, but its scope is becoming too inclusive for the intimate understanding of the few members of the staff, requiring, as it does, an authoritative grasp of the technology and economics peculiar to each separate subject treated. To properly meet these conditions it will be necessary to secure the assistance of special outside collaborators for such periods as may be required.

Acknowledgments for advice and collaboration are due to Mr. C. G. Atwater, of New York, in connection with the work on coal products; to Mr. Samuel Hawkes, of Corning, N. Y., in the field of ornamental glassware; and to Dr. Clifford Richardson, of New York, in giving direction to the work on native bitumens.

DISTRIBUTION AND EXCHANGE OF SPECIMENS.

The distribution of duplicates, mainly to schools and colleges, for educational purposes aggregated over 6,000 specimens, properly classified and labeled. Of these 3,746 were contained in 16 regular sets of mollusks, averaging 177 specimens each, and 19 regular sets of fossil invertebrates, of 48 specimens each. The balance of 2,305 specimens, comprised in 28 special sets, were principally fishes, insects and marine invertebrates, rocks, ores, minerals and fossils, and objects of ethnology and archeology.

In making exchanges for additions to the collections a total of 19,582 duplicate specimens was used. These consisted chiefly of plants, animals, fossils, rocks, ores and minerals, but included also some ethnological and archeological objects.

Material sent out to specialists for study on behalf of the Museum and otherwise amounted to 14,345 specimens, of which 6,261 were botanical, 6,772, zoological, and 1,312, paleontological.

Of the antiquated surveying apparatus transferred to the Museum for permanent preservation in 1914 by the Coast and Geodetic Survey, under a special act of Congress, a complete series having been installed in one of the exhibition halls, the duplicates, numbering 48 pieces, divided into five sets, were placed on indefinite loan with the following institutions where their educational value in view of their historical interest is appreciated: The Massachusetts Institute of Technology, the Case School of Applied Science, Northwestern University, the University of Michigan and Ohio State University.

NATIONAL GALLERY OF ART.

In the last report it was stated that Mr. Charles L. Freer had made arrangements for the immediate erection of the building to house the valuable collections of American and oriental art which he has presented to the Nation through the Smithsonian Institution, and also that the preliminary plans had been approved, the site selected and the necessary funds, amounting to $1,000,000, placed to the credit of the Institution. It is exceedingly gratifying to announce that, the detailed plans having been sufficiently advanced by that time, the work of excavating was begun on October 2, 1916, and at the close of the fiscal year the foundations, including the concrete walls enclosing the sub-basement, had been completed.

This addition to the Smithsonian group of buildings, with a frontage of 228 feet, a depth of 185 feet and a height of 46 feet, and containing an open central court about 65 feet square, will present an exterior of pink granite from quarries at Milford, Mass., a stone which has been employed with good effect for several prominent structures in Washington. Above the ground level it will consist only of a basement and main story, the former lighted by windows, the latter principally by skylights, leaving the upper part of the walls essentially unpierced except for the entrances, of which that on the north front comprises three large arched openings. The location, at the corner of Twelfth and B Streets, southwest, between the buildings of the Smithsonian Institution and the Department of Agriculture, seems to assure favorable surroundings for the future, as there is slight probability of intrusion by any high or otherwise objectionable constructions in that vicinity.

Nŏt only beautiful and effective in general design, but showing in interior plan a thorough adaptation to the requirements of the collections both as to space and to lighting, with such facilities as will make it practically an independent unit of the Smithsonian group, the character of the construction work so far as it has been carried leaves nothing to be desired in respect either to enduring quality or to interpretation of the architect's conception.

The sub-basement will contain the appliances connected with the heating, lighting and ventilation of the building, but steam and electric current will be supplied from the central plant of the Museum. In the basement, which will be a well-lighted story, will be located large studios and rooms for the storage of such parts of the collections as are not on exhibition, a capacious lecture hall, an office for the curator, and work and comfort rooms, furnishing, in fact, all necessary conveniences for administration, for serious study and for popular instruction.

The main story will be entirely devoted to exhibition purposes and be divided into 19 rooms, each designed for a particular subject or class of objects, reached by wide corridors. The Whistler collection will occupy 5 of these rooms, in one of which the decorations of the famous Peacock Room will be installed. The central court, to contain a fountain, will be a special feature of this story, large arched openings lighting the adjoining corridors and loggias. The entire available floor space of the main and basement stories will aggregate some 55,000 square feet, about equally divided between the two floors.

It will be recalled that this building is designed to accommodate only the Freer collections and to provide for the study and appreciation of their varied contents, which supply a vast amount of material for research work by specialists. As an integral part of this specific gift of art, the most important and valued donation which any individual has ever made, freely and unconditionally, to the Nation, it can not be otherwise employed. Its completion, an event anticipated for the fiscal year 1918–1919, while insuring an incalculable gain for the Museum and the public, will not, therefore, satisfy any of the needs, set forth in the last report, in respect to additional space for the national collections of both the applied and the fine arts.

Under the heading of bequests in this report an account is given of the terms contained in three wills recently admitted to probate by which the Gallery will be materially benefited. Exceptionally important is the provision made by the late Henry W. Ranger, N. A., the eminent landscape painter of New York, who died on November 7, 1916, leaving his residuary estate, estimated at over $200,000, to the National Academy of Design to be held as a permanent fund of

which the income is to be used for purchasing paintings by American artists, the paintings so obtained to be given to art or other institutions in America which maintain a gallery open to the public, upon the express condition that the National Gallery of Art shall have the option and right to take, reclaim and own any picture for its collection provided such option and right is exercised at any time during the five-year period beginning ten years after the artist's death and ending fifteen years after his death.

This generous action by Mr. Ranger, which is most gratifying to all art lovers of the country and may be expected to have a stimulating influence on the work of American artists, should result in a wider public distribution than hitherto of good American paintings and insure the gradual assembling for perpetual exhibition at Washington of some of the best that our painters shall produce. The system of selection and distribution will, in its working, be not unlike that which has been followed by the French government so effectively both for the national collections in Paris and the country at large, and it is to be hoped that the fund for so worthy a purpose may soon be greatly increased through the liberality of other benefactors. The National Gallery contains five of Mr. Ranger's paintings, all of which were presented by Mr. William T. Evans.

Residuary legatee of the estate of the late Rev. Bruce Hughes, of Lebanon, Pa., the Institution feels that the desire of the testator, to found "the Hughes Alcove of the said Smithsonian Institution," can most fittingly be accomplished by the establishment and maintenance of an alcove or section in the library of the Gallery for reference works on art, and, while the amount is not large, the interest will permit of the gradual building up of an important adjunct to the Gallery for which specific means have not heretofore been available.

Mrs. Mary Houston Eddy, in bequeathing to the Gallery certain paintings, miniatures, ivories and other art objects, as the "A. R. and M. H. Eddy Donation," specifically requested that they be kept together, which would have prevented their appropriate classified installation. As the collection is very desirable, this fact was brought to the attention of the executors with the result of securing such a modification of the conditions as would permit the acceptance of this generous benefaction, though this was not consummated until after the close of the year.

The permanent acquisitions by the Gallery included 13 oil paintings and 4 pieces of sculpture. The paintings were as follows:

By Benjamin West. A portrait of this celebrated early American painter by himself. Transferred to the Gallery by the Joint Committee of Congress on the Library, by which it was purchased in 1876.

By John W. Alexander. A figure picture entitled "June," painted in 1913 and considered an excellent representative example of this artist's work. Gift of Mr. William Alexander, of New York City.

By R. Swain Gifford. "On the Lagoon, Venice." Painted in 1880. Gift of Mrs. E. N. Vanderpoel, of New York City.

By Orlando Rouland. Portrait of James Jebusa Shannon, R. A., of London, England. Gift of Mr. Rouland.

By William F. Halsall. "The Song of the Sea." Gift of Mr. Halsall.

By Augustus Vincent Tack. Portrait of Ellwood Hendrick. Gift of Mr. Duncan Phillips, of Washington.

By Max Bohm, "The Happy Mother." By William Jurian Kaula, "Evening." By Eugene Vail, "A Breton Sunday." By Chauncey Foster Ryder, a landscape. Gift of Mrs. J. M. Longyear, of Brookline, Mass.

By Joseph Mortimer Lichtenauer. Portrait of Major General Julius Stahel, U. S. Volunteers. Gift of Mr. Lichtenauer.

By Henry Ulke. Portrait of Joseph Henry, first Secretary of the Smithsonian Institution, painted in 1875. This portrait, which has for a long time been hanging in the office of the Sergeant at Arms of the Senate, was transferred to the Gallery by a Senate resolution of February 5, 1917.

By Ossip Perelma. Portrait of Charles Doolittle Walcott, Secretary of the Smithsonian Institution. Deposited by the Smithsonian Institution.

Of sculpture there were the following:

By Jerome Connor. Bronze statue of Robert Emmet, the Irish patriot. Gift of the Emmet Statue Committee.

By Louis Potter. A bronze statue, 30 inches high, entitled "The Fire Dance." Gift of the sculptor's mother, Mrs. George R. Percy, of Bronxville, N. Y.

By Ferdinand Pettrich. A marble statue, "The Dying Tecumseh." Transferred from the United States Capitol. Cut in the marble are the following inscriptions: "Tecumseh grand Chief of the Western Indians; Fell in the battle of the Thames 1813." "Pettrich e. figli. sculp: 1856."

The Gallery also received as a gift from the estate of John Chandler Bancroft Davis, late of Washington, a plaster cast from the death mask of Oliver Cromwell.

The statue of Robert Emmet, mentioned among the permanent accessions to the Gallery as a gift from the Emmet Statue Committee, was formally presented by the Committee on the afternoon of June 28, the ceremonies taking place in the rotunda of the new building, which had been provided with a platform and seats for the occasion.

This striking figure, by Jerome Connor, sculptor, of Washington, is of bronze, 8 feet high, and represents the Irish patriot in the attitude of making a spirited address, the costume being that of Ireland at the period in which he lived. Standing in the center of the rotunda, it was draped with an American flag and an Irish flag. Among those in attendance and seated on the platform were the President of the United States and Mrs. Wilson; the Secretary of State, Mr. Lansing; Col. W. W. Harts, U. S. Army, in charge of public buildings and grounds; Judge Victor J. Dowling, of New York, chairman of the statue committee; Mr. Michael Francis Doyle, of Philadelphia, chairman of the committee in charge of arrangements, who presided; U. S. Senators James D. Phelan and Thomas J. Walsh; Rt. Rev. Alfred Harding, Bishop of Washington; Mgr. Cornelius F. Thomas, of St. Patrick's Church; Mr. Jerome Connor, Mr. John McCormack and Dr. Charles D. Walcott. The proceedings included an invocation by Bishop Harding, a eulogy on Emmet by Senator Phelan, presentation address by Judge Dowling, unveiling of the statue by Miss Alice O'Gorman, daughter of former Senator James O'Gorman of New York, assisted by four sailors, and its acceptance by Secretary Walcott. These were followed by the introduction of the sculptor to the audience, and the singing by Mr. McCormack of "She is Far from the Land," "Oh, Breathe not His Name" and "The Star-Spangled Banner," the exercises closing with a prayer by Monsignor Thomas.

The Gallery received as loans many paintings for display in connection with its own collection and also for special exhibition, and at times it became necessary to make use of several rooms besides the regular Gallery space for their arrangement. Twenty-five paintings from the valuable collection of Mr. Ralph Cross Johnson, enumerated in the last report, were withdrawn during the autumn, but, with one exception, they were returned to the Gallery near the close of the year, together with three additions: "Heavy Clouds," by John Constable; "Portrait of Helena Fourment," by J. Jordaens; and "Landscape-Evening," by Richard Wilson. The collection of Mr. W. A. Slater, also listed in a previous report, remained in the Gallery until December; while 21 of the paintings by contemporary foreign artists, deposited by The American Federation of Arts in 1915, though removed for a short period for exhibition elsewhere, were still in the Gallery at the end of the year.

Other loans of oil paintings were as follows:

From the Supreme Court of the District of Columbia, pending alterations in City Hall building, large portraits of George Washington, Andrew Jackson, Henry Clay and W. W. Corcoran.

From Dr. Nathan Boyd, of Washington, portrait of Gen. Franklin Pierce, by A. G. Powers, painted in 1852.

From Mr. C. F. Gunther, of Chicago, Ill., portrait of Maj. Andre, by Sir Thomas Lawrence.

From the artist, William F. Halsall, of Provincetown, Mass., "Our Glory—Battleship Oregon."

From the artist, William H. Holmes, of Washington, "The Wanderlusters."

From the artist, Alfred Ernest Macdonald, "Canberra, 1913," showing the site on which the Australian Commonwealth Federal Capital is being built.

From Mrs. Therese Davis McCagg, of Washington, Snowcapped mountain in the Tropics, by F. E. Church, and Mountain scene, by I. Diday.

From the artist, Thomas Moran, "Grand Canyon of the Yellowstone," and "A Rocky Mountain Solitude."

From Miss Gertrude M. Norton, of New York, two paintings by the late William E. Norton, entitled "Mussel Gatherers" and "Night Attack on the General Armstrong off Pico, Azores."

From Mr. William A. Slater, of Washington, "The Mill," by Hobbema.

From Miss Emily Tuckerman, of Washington, "Hindoo Merchants," by Edwin Lord Weeks, and "Landscape," by Herman Saftleven.

From Mrs. Walter R. Tuckerman, of Bethesda, Md., portrait of Joseph Tuckerman, D. D., by Gilbert Stuart, 1808.

From Mrs. J. M. Wiley, of Washington, "Battle Scene at the Bridge of Celore," by J. C. Bourguignon; "The Annunciation," by del Sarto; "Supplication of St. Peter," attributed to Correggio; and "David with Goliath's Head," attributed to Tintoretto.

There was also received for exhibition from the Federal Commission of the Fine Arts the plaster model, quarter size, of the figure or ideal statue, representing Orpheus, executed for the Francis Scott Key Memorial at Fort McHenry, Md., by Charles Henry Niehaus.

Four special loan exhibitions were held in the Gallery during the year. The most notable of these, given under the auspices of the National Park Service of the Department of the Interior during January and February, and designed to bring to the attention of Americans some of the marvelous natural attractions of their own country, consisted of 45 oil paintings illustrating scenes mainly in the National Parks and Monuments of the United States. Twenty-seven artists were represented. Assembled by the Department of the Interior in connection with the meeting of the National Parks Conference in the Museum auditorium from January 2 to 6, elsewhere mentioned, this interesting exhibition was opened with a special view on the evening of the second and the majority of the paintings remained on display until March. It was supplemented

by studies in oil for panels for the American Museum of Natural History depicting the Glacier National Park, by Edwin H. Deming; colored photographs of the National Parks by Fred H. Kiser; photographs and colored views of National Parks from various sources, and panoramic photographs made by Secretary Charles D. Walcott in connection with geological work in the Canadian Rockies. Following is a list of the paintings in the main exhibition:

Dean Babcock. "The Twin Sisters." "A Glimpse of the Range." "The Explorers." "The Crags." Rocky Mountain National Park. Lent by the artist.

Albert Bierstadt. "Mount Whitney." Sequoia National Park. Lent by the Minneapolis Institute of Arts.

"Whyte's Lake, Estes Park, Colorado." Rocky Mountain National Park. Lent by the Art Association of Indianapolis (John Herron Art Institute).

Howard Russell Butler. "Sunrise near Mesa Verde." Mesa Verde National Park. Lent by the artist.

"Sunshine and Shadow in The Grand Canyon, Arizona." Grand Canyon National Monument. Lent by the artist.

Elliott Daingerfield. "Trees on the Rim of The Grand Canyon, Arizona." "From Rim to Rim of The Grand Canyon, Arizona." Lent by the artist.

W. Herbert Dunton. "Late into Camp." "The Hunter's Supper." "The Start for the Hills." Lent by the artist.

J. R. Fountain. "Crater Lake, Oregon." Crater Lake National Park. Lent by the Southern Pacific Company.

Albert L. Groll. "Laguna Pueblo." New Mexico. Lent by the National Gallery of Art.

James Henry Harper. "Sunset on the Oregon Trail." Lent by the artist.

W. Victor Higgins. "Chile Venders, Taos." Pueblo of Taos, New Mexico. Lent by the artist.

Thomas Hill. "Yosemite Valley." Yosemite National Park. Lent by the Southern Pacific Company.

Sydney M. Laurence. "The Trapper." "Mount McKinley." Alaska. Lent by the National Gallery of Art.

William R. Leigh. "Grand Canyon." Arizona. Lent by Snedecor & Co.

Thomas Moran. "A Rocky Mountain Solitude." Rocky Mountain National Park. Lent by the artist.

"In The Grand Canyon of the Colorado." Arizona. Lent by the National Gallery of Art.

"Grand Canyon of the Yellowstone." Yellowstone National Park. Lent by the artist.

"Grand Canyon of Arizona on the Santa Fe." Lent by the Atchison, Topeka & Santa Fe Railway.

De Witt Parshall. "The Hermit Creek Canyon, The Grand Canyon." Arizona. Lent by the Worcester Art Museum.

"Isis Peak, The Grand Canyon." Arizona. Lent by the Syracuse Museum of Fine Arts.

"Granite Gorge, The Grand Canyon." Arizona. Lent by the Toledo Museum of Art.

Sheldon Parsons. "Morning in the Canyon." Grand Canyon, Arizona. Lent by the artist.

F. C. Peyraud. "Afternoon in The Grand Canyon." Arizona. Lent by the artist.

Edward H. Potthast. "The Chasm." Grand Canyon, Arizona. Lent by the artist.

"Bright Angel Canyon of Arizona on the Santa Fe." Grand Canyon, Arizona. Lent by the Atchison, Topeka & Santa Fe Railway.

Arthur J. E. Powell. "St. Mary's Lake." "Grinnell Lake and Glacier." Glacier National Park. Lent by the artist.

Lucien W. Powell. "Grand Canyon of the Yellowstone." Yellowstone National Park. Lent by the National Gallery of Art.

William Ritschel. "Awakening of The Grand Canyon of Arizona." Lent by the artist.

Carl Rungius. "Near Timberline, Bridges Forest Reserve, Wyoming." Yellowstone National Park. Lent by the artist.

Birger Sandzen. "Sunset in the Mountains, Colorado." "The Arapahoes." The Rocky Mountain National Park. "Sunset in the Grand Canyon." Arizona. Lent by the artist.

E. Serbaroli. "Mount Tamalpais." California. Lent by Hon. William Kent.

J. H. Twachtman. "Waterfall, Yellowstone Park." Yellowstone National Park. Lent by the City Art Museum of St. Louis.

Walter Ufer. "Indian Gardens." Grand Canyon, Arizona. Lent by the artist.

Peter Van Veen. "Mount Rockwell, Glacier National Park." Lent by the artist.

F. Ballard Williams. "Grand View, The Grand Canyon of Arizona on the Santa Fe." Lent by the Atchison, Topeka & Santa Fe Railway.

Of the other loan exhibitions, the earliest, from March 8 to April 23, consisted of 20 oil paintings and one bronze group by Edwin Willard Deming, illustrating the old-time Indian, his war, hunting, religious life and mythology. The second, opening with a special view on the evening of April 2 and continuing until the end of the month, included 27 oil paintings by Orlando Rouland, of New York.

20 of which were portraits and the remainder landscapes and figures. The former were especially interesting from the number of noteworthy persons represented, and one of this series, as elsewhere stated, was generously presented to the Gallery by the artist. The third comprised 48 paintings by the Russian artist, Ossip Perelma, mainly portraits and figure subjects, which were continued on exhibition from April 28 until the close of the year.

MISCELLANEOUS.

VISITORS.

The number of visitors to the natural history building during the year aggregated 343,183 for week days and 63,842 for Sundays, being a daily average of 1,096 for the former and of 1,227 for the latter. During inauguration week it reached a total of 37,800. At the arts and industries building and the Smithsonian building, which are opened only on week days, the total annual attendance was 161,700 and 86,335, respectively, and the daily average, 516 and 275.

The following tables show, respectively, the attendance of visitors during each month of the past year, and for each year since 1881, when the building now devoted to the arts and industries was first opened to the public.

Number of visitors during the year ending June 30, 1917.

Year and month.	Older Museum Building.	New Museum Building.	Smithsonian Building.	Year and month.	Older Museum Building.	New Museum Building.	Smithsonian Building.
1916.				1917.			
July	13,244	36,850	6,541	January	8,513	22,635	4,396
August	15,335	39,991	9,144	February	8,385	22,317	4,246
September	15,030	38,466	8,276	March	19,431	48,236	10,272
October	10,525	33,421	6,202	April	16,889	36,735	8,106
November	8,309	23,972	4,622	May	11,922	24,527	6,064
December	9,109	26,316	5,292	June	24,618	48,579	13,173
				Total	161,700	407,025	86,335

Number of visitors to the Museum and Smithsonian Buildings since 1881.

Year.	Older Museum Building.	New Museum Building.	Smithsonian Building.	Year.	Older Museum Building.	New Museum Building.	Smithsonian Building.
1881	150,000	.....	100,000	1899-1900	225,440	.....	133,147
1882	167,455	.....	152,744	1900-1	216,556	.....	151,563
1883	202,188	.....	104,823	1901-2	173,888	.....	144,107
1884 (half year)	97,661	.....	45,565	1902-3	315,307	.....	181,174
1884-85 (fiscal year)	205,026	.....	105,903	1903-4	220,778	.....	143,988
1885-86	174,225	.....	88,960	1904-5	235,921	.....	149,380
1886-87	216,562	.....	98,552	1905-6	210,886	.....	149,661
1887-88	249,665	.....	102,863	1906-7	210,107	.....	153,591
1888-89	374,843	.....	149,618	1907-8	299,659	.....	237,182
1889-90	274,324	.....	120,894	1908-9	245,187	.....	198,054
1890-91	286,426	.....	111,669	1909-10	228,804	50,403	179,163
1891-92	269,825	.....	114,817	1910-11	207,010	151,112	167,085
1892-93	319,930	.....	174,188	1911-12	172,182	281,887	143,134
1893-94	195,748	.....	103,910	1912-13	173,858	319,806	142,420
1894-95	201,744	.....	105,658	1913-14	146,533	329,381	102,645
1895-96	180,505	.....	103,650	1914-15	133,202	321,712	40,324
1896-97	229,606	.....	115,709	1915-16	146,956	381,226	48,517
1897-98	177,254	.....	99,273	1916-17	161,700	407,025	86,335
1898-99	192,471	.....	116,912				
				Total	7,880,432	2,242,554	4,667,268

BEQUESTS.

Henry Ward Ranger, N. A., one of the foremost of contemporary American landscape painters, died in New York City on November 7, 1916. He is represented in the National Gallery of Art by 5 canvases, the gift of Mr. William T. Evans, and through the warm friendship which existed between them, Mr. Ranger became deeply interested in the welfare and future of the Gallery. This fact is most strongly and gratifyingly manifested in his will, dated January 21, 1914, of the significance of which more has been said in connection with the account of the Gallery. It may be stated here, however, that the death of Mrs. Ranger preceded that of her husband. The wording of the will is as follows:

I, Henry W. Ranger, of the City, County and State of New York, do make, publish and declare this to be my Last Will and Testament, hereby revoking all other wills by me made.

First: I direct that all my just debts and funeral expenses, including the cost of interment, be paid by my Executors.

Second: All the rest, residue and remainder of my property, real, personal and mixed, and wheresoever situated, I give, devise and bequeath to my Trustees hereinafter named, and to their successor or successors, to have and to hold the same, In Trust, nevertheless, for the following uses and purposes, that is to say:

(1) If my wife, Helen Eudora Ranger, be living at the time of my death, I direct that the entire net income of my said residuary estate be paid semi-annually to her during her natural life.

(2) Upon the death of my said wife, Helen Eudora Ranger, if she be living at the time of my death, or, if my said wife be not living at the time of my death, then as soon after my decease as may be practicable, I direct that my entire residuary estate be paid over to the National Academy of Design, the principal to be kept invested and the income thereof to be spent by the Council of said Academy in purchasing paintings produced by American artists, at least two-thirds (2/3) of such income to be spent in the purchase of works by artists who are forty-five years of age and over, it remaining optional with the Council to spend the remaining one-third (1/3), or any part thereof, in the purchase of works by younger artists. All pictures so purchased are to be given by the Council to art institutions in America, or to any library or other institutions in America maintaining a gallery open to the public, all such gifts to be upon the express condition that the National Gallery at Washington, administered by the Smithsonian Institute, shall have the option and right, without cost, to take, reclaim and own any picture for their collection, provided they exercise such option and right at any time during the five year period beginning ten years after the artist's death and ending fifteen years after his death, and, if such option and right is not exercised during such period, the picture shall remain and be the property of the institution to which it was first given. The words "America" and "American" as used above shall be construed as equivalent to "North America" and "North American" respectively.

Third: The provision made in this will for my said wife, Helen Eudora Ranger, is to be in lieu of all dower rights which she might otherwise possess in any real estate of which I may die seized and possessed.

Fourth: I hereby authorize and empower my Executors and Trustees to hold any or all investments which I may own at my decease, as it may seem to them advisable at the time, and I direct that no loss by reason of such continued holding be chargeable against my said Executors and Trustees; and I further authorize and empower my Executors and Trustees to lease or mortgage, and to sell and convey, at public or private sale, at such times, on such terms and in such manner as such Executors and Trustees may deem best, all or any part of my said estate, real or personal, and to invest and reinvest the whole or any part of said trust estate in any and all securities or other investments of every kind and character in which the laws of the State of New York may at any time permit trustees to invest.

Fifth: I hereby nominate and appoint William Macbeth and Charles Henry Phelps, both of the City, County and State of New York, to be Executors of and Trustees under this my said will, and I direct that no bond or bonds shall be required of them, or either of them, either as Executors or Trustees, or in any capacity in which they may act under this will.

In Witness Whereof I, Henry W. Ranger, have hereunto set my hand and seal at the City of New York, this twenty-first day of January, One thousand nine hundred and fourteen.

HENRY W. RANGER. [SEAL.]

The Rev. Bruce Hughes, of Lebanon, Pa., who died on March 20, 1916, provided by the ninth paragraph of his will, dated November 24, 1914, that "All the balance and residue of my estate of which I may die seized shall be paid to the Smithsonian Institute of the City of Washington, District of Columbia, the sum so received to be invested and the income alone used to found the Hughes Alcove of the said Smithsonian Institute." The amount of the residuary

estate is estimated at about $4,000, the income from which it is intended to devote to the interests of the National Gallery of Art in the manner described in that connection, forming a permanent memorial to Mr. Hughes, ever increasing in extent and in importance to the public.

Mr. Julius Hurter, sr., of St. Louis, Mo., who died on December 6, 1916, at the age of 74 years, left to the National Museum by his will dated February 1, 1913, his collection of reptiles and batrachians, which was brought to Washington in January. Described in some detail elsewhere in this report, it may be explained here that Mr. Hurter had long been a correspondent of the Museum, and that his collection was one of the largest and finest of its kind anywhere in private possession.

In 1896 and 1899 some 66 models and other articles illustrating researches, experiments and inventions of Prof. Moses Gerrish Farmer, of Eliot, Me., who was a prominent pioneer in the development of the electrical industries, were deposited in the National Museum by his daughter, Miss Sarah J. Farmer, with the understanding that they would become its property at her decease. Miss Farmer has recently died and in her will, approved and allowed on September 10, 1917, occurs the following additional provision: "To the National Museum, Washington, D. C., all remaining models of my father's inventions, also all apparatus used by him." The acquisition of this collection in its entirety is important in view of the diversity of Prof. Farmer's activities in the field of electricity and and will greatly enrich the representation of that subject in the Museum.

On April 9 the attention of the Institution was called to the wishes of Mrs. Mary Houston Eddy, of Washington, lately deceased, expressed in the following codicil to her will, dated June 16, 1914, namely: "I give and bequeath unto The Smithsonian Institution, for the National Gallery of Art, at Washington, D. C., the articles hereinafter enumerated in this sub-item, the same to be known as the 'A. R. and M. H. Eddy Donation,' and to be kept intact and placed together in the aforesaid Gallery of Art; these articles are as follows:" Included in the enumeration are 12 paintings in oil, water color and pastel, 19 miniatures, 9 carved ivories, and 11 objects in porcelain, bronze, enamel, marble, etc. The executors of Mrs. Eddy's estate being advised that, while the articles were all valuable and greatly desired, to install them as a unit would be incompatible with museum classification, a satisfactory readjustment of the matter in this respect was reached, though not until after the close of the fiscal year, and a more complete account of this interesting collection must be left for the next report.

PUBLICATIONS.

The publications of the year comprised 7 volumes and 76 separate papers. The former consisted of Volume 50 of the Proceedings, volumes 16 and 17 of Contributions from the U. S. National Herbarium, and the following Bulletins: No. 71, "A monograph of the Foraminifera of the North Pacific Ocean, Part VI, Miliolidae," by Joseph A. Cushman; No. 93, "The sessile barnacles (Cirripedia) contained in the collections of the U. S. National Museum; including a monograph of the American species," by Henry A. Pilsbry; No. 96, "A synopsis of American early Tertiary cheilostome bryozoa," by Ferdinand Canu and Ray S. Bassler; and No. 98, "The birds of the Anamba Islands," by Harry C. Oberholser. Of the 76 pamphlets issued in separate form for prompt distribution, 34 were from Volume 51, 21 from Volume 52, and 17 from Volume 53 of the Proceedings; 2 constituted parts of the Contributions from the U. S. National Herbarium, and 2 were catalogues of loan collections of paintings exhibited in the National Gallery of Art.

The distribution of volumes and separates to libraries, other establishments and individuals on the regular mailing list aggregated 54,365 copies, in addition to which about 10,000 copies of the publications of this and previous years were supplied in response to special applications.

Besides the papers above mentioned many contributions based on material in the Museum were published by other bureaus of the Government and by private institutions, all of which are cited in the bibliography. Those issued by the Smithsonian Institution included the following which appeared in the Miscellaneous Collections: "Cambrian Trilobites," "Nomenclature of some Cambrian Cordilleran formations," and "The Albertella fauna in British Columbia and Montana," by Charles D. Walcott; "Maxonia, a new genus of tropical American ferns," by Carl Christensen; "Three new murine rodents from Africa," by N. Hollister; "Bones of mammals from Indian sites in Cuba and Santo Domingo," and "The teeth of a monkey found in Cuba," by Gerrit S. Miller, jr.; "Three remarkable new species of birds from Santo Domingo," by J. H. Riley; "Explorations and field-work of the Smithsonian Institution in 1916"; "On the occurrence of Benthodesmus atlanticus Goode and Bean on the coast of British Columbia," by C. H. Gilbert; "Archeological investigations in New Mexico, Colorado, and Utah," by J. Walter Fewkes; "Preliminary diagnoses of new mammals obtained by the Yale-National Geographic Society Peruvian Expedition," by Oldfield Thomas; and "New East African plants," by Paul C. Standley. In addition to the foregoing the Institution also published "A

contribution to the comparative histology of the femur," by J. S. Foote, in the series Contributions to Knowledge.

Besides supervising the printing of the Museum publications, the editorial office also has charge of all miscellaneous printing and binding.

LIBRARY.

The library of the Museum is assembled almost exclusively with reference to the working up of the collections, but owing to the exceptional diversity of these it embraces a wide range of subjects in the sciences and arts. The main library is housed in the natural history building, while the publications on the useful arts are provided for in the older building. Moreover, each of the divisions and principal offices has its own sectional library, consisting of the books relating wholly to its subject, which are withdrawn from the main branches and so distributed in order to facilitate the progress of work. The use of the library and its sections is not, however, restricted to members of the staff, being extended to all properly qualified persons, and this privilege is extensively availed of by the Government scientific bureaus and other establishments in Washington.

Urgent needs of the library are additional means for purchasing and binding. Under prevailing circumstances, it is impossible to keep abreast with current literature, especially periodicals, or to obtain more than a fraction of the private publications which are essential to the operations of the Museum. Furthermore, a large share of the publications are received in paper covers, in which condition they soon become injured and defaced, and under present appropriations only a very limited amount of binding can be done in any year.

The increment during last year, largely obtained through gift and exchange, amounted to 1,572 volumes, 65 parts of volumes and 3,556 pamphlets, which increased the resources of the library to 49,285 volumes and 82,794 pamphlets and unbound papers. Carrying out his generous tender to the Smithsonian Institution, made in 1905, Capt. John Donnell Smith, of Baltimore, transmitted in January the first consignment from his extensive botanical library, including 561 volumes and 293 pamphlets. Dr. E. A. Mearns, U. S. Army, long an Associate of the Museum, whose death occurred during the year, was a constant contributor and his widow, in carrying out his final wishes in this respect, presented the remainder of his scientific library, which is especially rich in works on mammals, birds and plants. Dr. William H. Dall added 307 titles to the library on mollusks, while among other members of the staff to whom acknowledgments are due for gifts of publications are Dr. Charles

D. Walcott, Mr. William H. Holmes, Dr. O. P. Hay, Dr. C. W. Richmond, Mr. W. R. Maxon and Mr. J. C. Crawford.

MEETINGS AND CONGRESSES.

The Washington Society of the Fine Arts, as during previous years, made use of the auditorium in the natural history building for its three courses of lectures, which were as follows: A members' course of six lectures on the fine arts, delivered on a Wednesday evening in each month from November 15 to April 11, namely, "Mural painting in France and America," by Kenyon Cox; "Schools of painting," by Cecilia Beaux; "Why worry with art?" by H. Granville Barker; "Tolstoi's theory of the fine arts as illustrated by current fiction and poetry," by Bliss Perry; "Scandinavian art," by Christian Brinton; and "Gothic elements in modern architecture," by Prof. A. D. F. Hamlin. Five lecture recitals on "The most modern songs," given, with one exception, on a Monday evening in each month from November 6 to March 12, by Nicholas Douty, with Miss Mary E. MacElree as accompanist, entitled, respectively, "Italian and Spanish songs," "Russian and Finnish songs," "French songs," "German, Austrian and Bohemian songs," and "English and American songs." There was also a separate recital on March 29 by Mrs. Edward MacDowell on the work of her late husband, the eminent composer. A course of six popular lectures on "House furnishing and decoration," on two Fridays each in January, February and March, by Frank Alvah Parsons, with the following titles: "The social aspect of art," "Relation of architecture to interior decoration," "Uses and abuses in furniture choice," "Historic textiles and oriental rugs in modern houses," "The decorative function of pictures," and "The essentials in art appreciation or art creation."

Other societies which met regularly in the Museum, mainly utilizing the larger committee room, were the Anthropological Society of Washington, monthly, from October to May; the District of Columbia Dental Society, monthly, from October to June; and the Society of Federal Photographers, eleven meetings, from October to April. Included in the program of the last named was an illustrated lecture by Mr. Clarence J. Blanchard of the Reclamation Service, descriptive of a trip made by himself, Mr. Cowling, official photographer, and other members of a Government party to several of the National Parks and reservations in the West; and an exhibition of colored motion pictures given in the main hall of the Smithsonian building.

One of the most important functions of the year was a National Parks Conference under the auspices of the National Park Service of the Department of the Interior. Morning, afternoon and evening sessions were held in the auditorium on the five days from January

2 to 6, inclusive, and a prominent feature of the conference was a loan collection of 45 paintings chiefly of scenes in the National Parks and Monuments of the United States, installed in the National Gallery of Art, in connection with which they are described. Organized by Mr. Stephen T. Mather, assistant to the Secretary of the Interior, the conference met with merited success and accomplished much in bringing to the attention of the American public the varied and exceptional attractions of the Government reservations for tourists, now debarred from their European travels. There were 54 speakers, with as many subjects, including an illustrated lecture on each evening except the first. Taking part in the program were Members of Congress, officials of the Government and representatives of various organizations throughout the country.

The National Academy of Sciences at its annual meeting, April 16–18, occupied the auditorium for its scientific sessions, which were open to the public, and the committee rooms for business purposes. Special features were two lectures under the William Ellery Hale foundation by Prof. Edwin Grant Conklin, of Princeton University, on "Methods and causes of organic evolution," and a reception in the main hall of the Smithsonian building. At the latter were shown motion picture films by Alessandro Fabbri and the Prizma process, which were repeated on the afternoon of April 20, for the benefit of the employees of the Smithsonian Institution and its branches. On the evening of February 1, Dr. L. O. Howard, as retiring president of the Washington Academy of Sciences, gave an illustrated lecture on the "Carriage of disease by insects"; and on February 9, meeting in one of the committee rooms, the geologists in the service of the Government listened to an address by Maj. James A. Woodruff, of the War College. Several reels of Alaskan views relating to the Reclamation Service were shown in the auditorium on November 28 by the Bureau of Commercial Economics for the benefit of officials of the Canadian Government; and the same hall was used by the Audubon Society of the District of Columbia on the evening of March 28, 1917, for a lecture by Ernest Harold Baynes on "Bird life," illustrated with lantern slides and motion pictures.

Evening lectures on literature and art were delivered in the auditorium, as follows: On February 21, by Mr. Percival Chubb, of St. Louis, president of the Drama League of America, under the auspices of the Washington Center of the League, on "The American spirit and its expression in art and the drama"; on March 24, by Dr. Charles William Wallace, of the University of Nebraska, before the Shakespeare Society of Washington, on the subject of his discoveries of Shakespeare documents in the official British archives; on May 15 and 17, under the auspices of the Belgian Scholarship Committee and George Washington University, by Prof. Victor

Horta, dean of the Royal School of Fine Arts of Brussels, on "Characteristics of the religious and civil architecture of Belgium," and "One century of modern arts in Belgium." The Fortnightly Club of Washington held a meeting on May 7 in one of the committee rooms in connection with a visit to the National Gallery of Art.

On the afternoon of April 28 certain motion picture films relating to the Washington public schools and belonging to the U. S. Government Board of the Panama-Pacific International Exposition were shown for the benefit of the Board of Education and the school teachers of Washington. The Boy Scouts of Washington had use of one of the committee rooms on February 3, and on March 17 the deputy commissioner of this association, Mr. J. W. Patton, with some of the older Boy Scouts, met in the auditorium for the purpose of organizing a junior council.

To the Department of Agriculture the necessary facilities were granted for an official hearing on August 16, 1916, in relation to the operation of the Federal Aid Road Act, by the Office of Public Roads and Rural Engineering; for meetings under the States Relations Service, from December 11 to 16, of the State leaders of Women's work for the fifteen Southern States in this service, with an exhibit pertinent to the subjects discussed; for meetings of the field agents and other officials of the Bureau of Crop Estimates from January 22–27, 1917, for instruction and conference respecting crop reporting methods and live stock production; for a meeting by the Office of Markets and Rural Organization on March 7 and 8, and again on the evening of March 27 for a motion picture exhibition illustrating the various stages in the cotton industry from the seeding of the ground to the manufactured cloth; for a meeting on April 30, 1917, of women magazine writers, called together by the Secretary of Agriculture for a conference under the auspices of the Office of Home Economics, States Relations Service; and for a conference on May 10 between representatives of the Department of Agriculture and of the agricultural seed trade.

Other meetings pertaining to agricultural subjects were the following: By the Northern Nut Growers' Association on September 8 and 9; the Washington Section of the Society of American Foresters on the evening of November 9; the National Potato Association of America on November 13, accompanied by an exhibit of potatoes; the fourth annual conference of the Woman's National Farm and Garden Association on April 25 to 27, with morning and afternoon sessions and one evening session at which illustrated addresses were given by Col. W. W. Harts, U. S. Army, on the "Development of Washington" and Mrs. Charles D. Walcott on "Canadian wild flowers." The exhibition halls in the natural history building were

opened on the evening of December 6 for the benefit of the Ohio Corn Boys and Domestic Science Girls, then on a visit to Washington.

The National Association of Postmasters held its nineteenth annual convention in the auditorium from July 18 to 21, 1916, with an exhibition in the adjoining main hall of labor-saving and other devices of the postal service, partly taken from the Museum collections. On the evening of October 11, a large number of motion picture films which were to be sent to South America were shown by the Bureau of Foreign and Domestic Commerce of the Department of Commerce. A meeting of the National Research Council took place in one of the committee rooms on April 19.

The Bureau of Commercial Economics was granted permission to show some lantern slides and motion pictures relating to the prevention of contagious diseases, prepared by the National Cash Register Co., of Dayton, Ohio, in the auditorium on the afternoon of May 17, 1917, for the benefit of the Committee on Supplies of the Council of National Defense. The pictures which form part of a traveling outfit, were explained by employees of the Cash Register Co. The same Committee on Supplies held meetings on June 13 and 14.

The auditorium was used on June 1, 1917, for an address to the employees of the Institution and its branches by Mr. Eugene E. Thompson, secretary of the Washington Liberty Loan Committee, who explained the object of the Liberty Loan, how the bonds could be purchased, and the desire of the Federal officials having the matter in charge that the first loan of the United States receive as great a number of individual subscriptions as did the last loan in Great Britain. The Inter-Departmental Chorus utilized the auditorium for two rehearsals, on June 9 and 12, in preparation for the musical program during Flag Day exercises on the Monument grounds on June 14, 1917. They were directed by Mr. Earl Carbaugh.

A special exhibition illustrative of the work of the Smithsonian Institution and its branches, installed in the lower hall of the natural history building for the benefit of visitors during inaugural week, was opened to the public on February 26 and continued until May 8. An illustrated address was given in the auditorium under the auspices of the Smithsonian Rifle Club on the evening of February 28 by Maj. William C. Harllee, U. S. Marine Corps, who spoke on the subject of rifle practice, dealing mainly with work on the Winthrop Rifle Range, of which he was the organizer. Motion pictures of the range, of battleship target practice at sea and of scenes at the Guantanamo Naval Base in Cuba, were shown. A Smithsonian Auxiliary of the District of Columbia Chapter of the Red Cross Society was organized on June 4 by ladies connected with the staff of the Institution and its branches, 33 having been present on

that occasion. Membership is open to all employees, both men and women, and members of their families, and the organization has been well supported. One of the committee rooms in the natural history building has been assigned to its use.

Receptions in the natural history building, on the invitation of the Regents and Secretary of the Institution, at which Dr. and Mrs. Walcott, sometimes assisted by others, received, were given as follows: At a special view of paintings by Mr. Orlando Rouland in the National Gallery of Art on the evening of April 2; to the delegates to the annual convention of the Daughters of the American Revolution on the evening of April 14, for which all of the exhibition halls on the first floor were open; in honor of the delegates to the Eighth Annual Convention of the American Federation of Arts, on the evening of May 17; in honor of the visiting Confederate Veterans, Sons of Confederate Veterans and the Daughters of the Confederacy, on the evening of June 6, the receiving party including Miss Mary Lee and members of the local reception committee. All of the exhibition halls in the first and second stories were used for this last occasion. A series of motion pictures of scenes in Washington was also shown in the auditorium where music was furnished by an orchestra of several pieces.

On the evening of June 14 the National Academy of Sciences tendered a reception in honor of the French Scientific Mission to the United States in the main hall of the Smithsonian building, the guests being received by Dr. and Mrs. Walcott and by members of the French Mission and of the Academy. Music was furnished by a section of the Marine Band. In the same hall Dr. and Mrs. Walcott met the employees of the Institution and its branches on the evening of January 31.

ORGANIZATION AND STAFF.

Mr. N. Hollister, assistant curator of mammals since January 3, 1910, became Superintendent of the National Zoological Park on November 1, 1916. Dr. J. N. Rose resumed his position of associate curator of plants on January 1, 1917, after a prolonged furlough to enable him to give his entire attention to the study of the Cactaceæ for the Carnegie Institution of Washington. Mr. H. R. Rosen, aid in the division of plants, resigned on May 31, 1917, and Miss Mary F. Miller was employed for a month as an assistant botanist, beginning May 11. Mr. Isaac Ginsburg was appointed aid in the division of fishes on September 1, 1916, and Mr. Alan H. Pottinger, aid in the division of insects on November 16. Mr. Edward J. Brown, of Los Angeles, Cal., who has long been an active contributor to the collections, was designated honorary collaborator in zoology on January 31, 1917, and Mr. Alfred M. Collins, of Philadelphia, chief of the

Collins-Garner Congo expedition in the interest of the Smithsonian Institution, received the same designation for a year from February 11.

Dr. J. P. Iddings, of Washington, to whom the Museum is indebted for valuable services and material, was made honorary associate in petrology on June 9, 1917; and Dr. W. T. Schaller, of the Geological Survey, honorary custodian of gems and precious stones on July 1, 1916. Mr. H. D. Chabot resigned on September 8, 1916, as aid in paleontology, to which position Mrs. Eula D. McEwan was appointed on May 10, 1917. Mr. Philip A. Means, of Boston, was designated honorary collaborator in archeology for one year from July 24, 1916; and Dr. Harley Stamp, of Philadelphia, to the same position in the division of physical anthropology for one year from May 11, 1917. Mr. Loring W. Beeson, who succeeded the late T. W. Smillie as chief photographer of the Museum on April 3, 1917, was also made custodian of the section of photography on June 30.

Mr. George de S. Canavarro, assistant curator of wood technology, resigned on September 30, 1916, and Mr. Carl W. Mitman, assistant curator of mineral technology, on May 31, 1917, the former being succeeded on June 1 by Mr. Roger B. Maxwell.

The Museum was deprived by death of five important members of its staff, all of whom had been long and actively in its service. They were Dr. Edgar A. Mearns, U. S. Army, associate in zoology; Mr. J. D. McGuire, collaborator in American archeology; Mr. Otto Heidemann, custodian of Hemiptera; Mr. Thomas W. Smillie, chief photographer and custodian of the photographic collection; and Mr. Randolph I. Geare, chief of correspondence and documents.

Lieut. Col. Edgar Alexander Mearns, surgeon, U. S. Army (retired), associate in zoology and for many years one of the most valued contributors to the collections of the National Museum, died at the Walter Reed Hospital in Washington on November 1, 1916. Born at Highland Falls, N. Y., September 11, 1856, he was graduated from the College of Physicians and Surgeons of New York in 1881, and in 1883 was appointed a first lieutenant in the Medical Corps of the Army, in which his active service was terminated, because of disability, on January 1, 1909.

At a very early age Dr. Mearns became interested in the fauna and flora of the Hudson Highlands, and for several years he assiduously gathered data and material for a general report on the natural history of that region. After joining the Army, however, this purpose had to be abandoned, though an account of the birds had already been published and a study of the remaining vertebrates, with observations on the flora, was later contributed. Association with well known naturalists and intensive field work, coupled with boundless enthusiasm, had given Dr. Mearns a basis for important service

in his chosen subjects, but his duties as an Army surgeon, stationed at remote posts for years at a time, permitted him but infrequent opportunities to study his ever increasing collections. This circumstance doubtless prevented him from producing a monumental published work, but it contributed largely to his development as a field naturalist of unsurpassed ability.

At Fort Verde, Ariz., his first post, Dr. Mearns made large collections, chiefly of mammals, birds, plants and archeological objects, which were sent to the American Museum of Natural History in New York, and that institution continued to receive the fruits of his activities until 1892. In this year he was attached to the International Boundary Commission as medical officer and naturalist, being permitted, in the latter capacity, to establish a biological section of the survey provided it could be conducted without additional cost to the Commission. By cooperation with the National Museum he was enabled to carry out this plan, and he conducted important investigations along the Mexican border from El Paso to the Pacific, one of the results of which was a series of about 30,000 natural history specimens. These were transmitted to the National Museum, which also became the depository for all of Dr. Mearns' subsequent collections. In the Philippines, where he served in 1903 and 1904 and from 1905 to 1907, Dr. Mearns achieved notable success through the exploration of little known mountains and islands. He was in command of expeditions which made the first recorded ascents of Mt. Malindang in Mindanao and Mt. Halcon in Mindoro, and also collected at Mt. Apo, the highest peak in the archipelago.

Although a sufferer from diabetes at the time of his retirement in 1909, Dr. Mearns was "assigned to active duty with his consent," for service as medical officer and chief naturalist on the Smithsonian African Expedition under the direction of Col. Theodore Roosevelt, and to the success of this undertaking he worked diligently, devoting his time principally to birds and plants. On his return to Washington he began a report on the ornithological results, but before the lapse of many months he received a request from Mr. Childs Frick to accompany him on a trip to Abyssinia and British East Africa which would traverse territory not covered by the previous expedition. The opportunity for securing additional material for his studies strongly appealed to him, the proposition was accepted, and in the latter part of 1911 he was again in Africa, where he remained about a year, making another very large collection of birds.

With the rich resources now at his command, Dr. Mearns was fully prepared to settle down to research work and the completion of studies long projected, but a life of exposure and privation, with the progress of his malady, had too greatly reduced his vitality to permit him to carry on his investigations with regularity. He con-

tinued at work for two or three years as his strength allowed, and finally succumbed in the midst of his greatest undertaking. His generous impulses, however, had secured the permanent preservation of his extensive and rich collections and scientific library in the two Washington and New York museums. His botanical contributions to the National Museum have been greater than those of any other individual, and more than one-tenth of the birds in this Museum were collected or presented by him. His scientific publications include about 125 titles, chiefly on biological subjects. He was a patron of the American Museum of Natural History, a correspondent of the Academy of Natural Sciences of Philadelphia, and a member of various scientific societies.

Joseph Deakins McGuire was born in Washington, D. C., November 26, 1842, the son of James C. McGuire. His early education was received at Rittenhouse Academy and Georgetown College, and he entered Princeton University in the class of 1863. At the outbreak of the Civil War, however, he went to Europe, where he remained about three years, a part of that time at Hohnheim, an agricultural college near Stuttgart. Returning to this country in 1864, he studied law, was admitted to the Maryland bar, and served as State's attorney for Howard County from 1884 to 1900. His residence was at Wilton, near Ellicott City, Md., for 35 years, though he spent much time in Washington, to which place he removed permanently in 1900. His death occurred on September 6, 1916.

Mr. McGuire became deeply interested in archeological researches, and after settling in Washington devoted himself entirely to this subject until, in 1912, failing health caused him to give up active work. His published papers are a distinct contribution to science, the most important being "A study of primitive methods of drilling," and "Pipes and smoking customs of the American aborigines." A large archeological collection which he had previously assembled, comprising upward of eight thousand Indian implements and other kindred articles, was made a gift to the Museum in 1900. His connection with the Museum as honorary collaborator in American archeology, beginning in 1903, continued until his death. It should also be mentioned that, several years ago, Princeton honored him with the degree of master of arts, in recognition of his scientific work.

Otto Heidemann was born in Magdeburg, Germany, September 1, 1842, and came to this country after the close of the Franco-Prussian war. By profession a wood engraver, he was employed in that capacity by the Department of Agriculture during twelve years beginning in 1883, his skill leading to his being entrusted with the making of the cuts for the illustrations of insects. An interest in entomology was thus aroused, and taking up the study when over fifty years of

age, he soon became an authority on his chosen group, the Hemiptera. This remarkable achievement was due to his natural aptitude for systematic work and ready grasp of the problems of scientific investigation, combined with his artistic ability and careful attention to small details, developed by his training as an engraver. He was appointed honorary custodian of Hemiptera in the Museum in 1907, a position he was still holding at the time of his death, November 17, 1916. Of broad accomplishments, in addition to being one of the leading hemipterists and a scientific artist whose drawings could not be surpassed, Mr. Heidemann was a writer of plays in both German and English and an earnest student of the social problems of our day.

Thomas William Smillie was born in Edinburgh, Scotland, April 14, 1843, and came to Washington with his parents about 1848, his father being remembered as a celebrated landscape gardener in this city. He entered Georgetown College, specializing in chemistry and medicine, and though he remained but two years, on account of ill health, the training there obtained laid a solid foundation for his career in photography which made his name known throughout this country and in Europe.

Mr. Smillie was first employed by the Smithsonian Institution in 1869–1870, and in June, 1871, became photographer of the Museum, remaining at the head of the photographic laboratory up to the time of his decease on March 7, 1917. His researches in this subject were extensive and fruitful, and he was the author of numerous articles, two of which were published by the Institution. He also served for several years as expert in inks for the Post Office Department; was extensively employed by the Fish Commission during its early period, introducing methods which led to remarkably fine results; and at several fishery and other expositions was represented by many enlarged photographs, of exceptional excellence for their time. He was the inventor of a process of photographing on wood for engraving, and devised many other novelties in the field of his profession.

Important assistance was rendered to Secretary Langley when he first introduced photographic recording with the bolometer for mapping the infra-red solar spectrum, and later when investigating the flight of soaring birds in connection with his aerodromic studies. He was in charge of the photographic work of the Smithsonian Institution at the total solar eclipse of May, 1900, at Wadesboro, N. C. The most lasting record made by Mr. Smillie, however, is a collection illustrating the history of photography from the earliest times, begun many years ago, which fills an entire gallery in the Museum and has no counterpart elsewhere in the world.

Mr. Smillie was a fellow of the Royal Photographic Society of London, an honorary member of the Paris Academy of Inventions, honorary president of the Federal Photographic Society of America

and a member of several scientific societies in the United States. He also received many medals and awards from expositions and associations in this country and in Europe.

Randolph Iltyd Geare, who was born at Abingdon, England, February 13, 1854, came to the United States in 1872 and engaged in teaching until 1881 when he entered the service of the U. S. Fish Commission and shortly afterward that of the National Museum. In the latter he became chief of the division of correspondence and documents in 1888, filling this position efficiently and faithfully until his death on April 11, 1917. Mr. Geare's activities occupied a prominent place in the affairs of the Museum. He prepared several bibliographical papers and contributed to the magazines numerous popular articles on scientific subjects largely relating to museum collections.

THE MUSEUM STAFF.

[June 30, 1917.]

CHARLES D. WALCOTT, Secretary of the Smithsonian Institution, Keeper *ex officio*.

RICHARD RATHBUN, Assistant Secretary, in charge of the United States National Museum.

W. DE C. RAVENEL, Administrative Assistant.

SCIENTIFIC STAFF.

DEPARTMENT OF ANTHROPOLOGY:

William H. Holmes, Head Curator.

Division of Ethnology: Walter Hough, Curator; Neil M. Judd, Aid; J. W. Fewkes, Collaborator; Arthur P. Rice, Collaborator.

Division of American Archeology: William H. Holmes, Curator; E. P. Upham, Aid.

Division of Old World Archeology: I. M. Casanowicz, Assistant Curator.

Division of Physical Anthropology: Aleš Hrdlička, Curator; R. D. Moore, Aid.

Division of Mechanical Technology: George C. Maynard, Curator.

Division of Graphic Arts: Paul Brockett, Custodian; Ruel P. Tolman, Aid.

Section of Photography: Loring W. Beeson, Custodian.

Division of History: A. Howard Clark, Honorary Curator; T. T. Belote, Assistant Curator.

Associates in Historic Archeology: Paul Haupt, Cyrus Adler.

Collaborator in Archeology: Philip A. Means.

Collaborator in Anthropology: Harley Stamp.

DEPARTMENT OF BIOLOGY:

Leonhard Stejneger, Head Curator; James E. Benedict, Chief of Exhibits.

Division of Mammals: Gerrit S. Miller, jr., Curator.

Division of Birds: Robert Ridgway, Curator; Charles W. Richmond, Assistant Curator; J. H. Riley, Aid; Edward J. Brown, Collaborator.

Division of Reptiles and Batrachians: Leonhard Stejneger, Curator; R. G. Paine, Aid.

Division of Fishes: Barton A. Bean, Assistant Curator; Isaac Ginsburg, Aid.

Division of Insects: L. O. Howard, Honorary Curator; J. C. Crawford, Associate Curator; A. H. Pottinger, Aid.

Section of Hymenoptera: J. C. Crawford, in charge.

Section of Myriapoda: O. F. Cook, Custodian.

Section of Diptera: Frederick Knab, Custodian.

Section of Muscoid Diptera: C. H. T. Townsend, Custodian.

Section of Coleoptera: E. A. Schwarz, Custodian.

Section of Lepidoptera: Harrison G. Dyar, Custodian.

Section of Orthoptera: A. N. Caudell, Custodian.

Section of Forest Tree Beetles: A. D. Hopkins, Custodian.

Division of Marine Invertebrates: Paul Bartsch, Curator; William H. Dall, Honorary Curator of Mollusks; Waldo L. Schmitt, Assistant Curator; Austin H. Clark, Assistant Curator; William B. Marshall, Assistant Curator; C. R. Shoemaker, Aid; Pearl L. Boone, Aid; H. K. Harring, Custodian of the Rotatoria; Harriet Richardson Searle, Collaborator; Mary Breen, Collaborator.

Section of Helminthological Collections: C. W. Stiles, Custodian; B. H. Ransom, Assistant Custodian.

DEPARTMENT OF BIOLOGY—Continued.

Division of Plants (National Herbarium): Frederick V. Coville, Honorary Curator; J. N. Rose, Associate Curator; W. R. Maxon, Associate Curator; P. C. Standley, Assistant Curator.

Section of Grasses: Albert S. Hitchcock, Custodian.

Section of Cryptogamic Collections: O. F. Cook, Assistant Curator.

Section of Higher Algae: W. T. Swingle, Custodian.

Section of Lower Fungi: D. G. Fairchild, Custodian.

Section of Diatoms: Albert Mann, Custodian.

Associates in Zoology: C. Hart Merriam, W. L. Abbott, Mary J. Rathbun.

Associate in Botany: John Donnell Smith.

Collaborator in Zoology: Alfred M. Collins.

DEPARTMENT OF GEOLOGY:

George P. Merrill, Head Curator.

Division of Physical and Chemical Geology (Systematic and Applied): George P. Merrill, Curator; James C. Martin, Assistant Curator.

Division of Mineralogy and Petrology: F. W. Clarke, Honorary Curator; Edgar T. Wherry, Assistant Curator; W. T. Schaller, Custodian of Gems and Precious Stones.

Division of Paleontology: R. S. Bassler, Curator; Charles E. Resser, Assistant Curator.

Section of Invertebrate Paleontology: T. W. Stanton, Custodian of Mesozoic Collection; William H. Dall, Associate Curator of Cenozoic Collection; T. Wayland Vaughan, Custodian of Madreporarian Corals.

Section of Vertebrate Paleontology: James W. Gidley, Assistant Curator of Fossil Mammals; Charles W. Gilmore, Assistant Curator of Fossil Reptiles.

Section of Paleobotany: David White, Associate Curator; F. H. Knowlton, Custodian of Mesozoic Plants; Mrs. Eula D. McEwan, Aid.

Associates in Paleontology: Frank Springer, E. O. Ulrich.

Associate in Petrology: Jos. P. Iddings.

DIVISION OF TEXTILES:

Frederick L. Lewton, Curator.

Section of Wood Technology: Roger B. Maxwell, Assistant Curator.

DIVISION OF MEDICINE:

James M. Flint, United States Navy (Retired), Associate.

DIVISION OF MINERAL TECHNOLOGY:

Chester G. Gilbert, Curator.

NATIONAL GALLERY OF ART:

William H. Holmes, Curator.

ADMINISTRATIVE STAFF.

Disbursing Agent, W. I. Adams.

Superintendent of Buildings and Labor, J. S. Goldsmith.

Acting Chief of Correspondence and Documents, H. L. Bryant.

Editor, Marcus Benjamin.

Editorial Clerk, E. S. Steele.

Assistant Librarian, N. P. Scudder.

Photographer, Loring W. Beeson.

Registrar, S. C. Brown.

Property Clerk, W. A. Knowles.

Engineer, C. R. Denmark.

LIST OF ACCESSIONS TO THE COLLECTIONS DURING THE FISCAL YEAR 1916–1917.

[Except when otherwise indicated, the specimens were presented or were transferred by bureaus of the Government in accordance with law.]

ABBOTT, Dr. WILLIAM L., Philadelphia, Pa.: 818 mammals, 79 odd skulls of mammals, 985 bird skins, 37 alcoholics and skeletons of birds, 8 bird eggs, 1,013 shells, 21 reptiles and batrachians, 7 insects, 2 helminthological and 124 ethnological specimens, collected by Mr. H. C. Raven in Celebes (60165, 60755, 61081); mammals, birds, reptiles, land shells, insects and Indian relics, from San Lorenzo Bay, Santo Domingo (60407); 159 birds, 70 mammals, 20 reptiles, 100 insects, 250 land mollusks and 221 anthropological specimens, from Santo Domingo (60526); 32 mammals (23 in alcohol), 198 skins and 17 skeletons of birds, 30 alcoholic reptiles and 60 mollusks, collected in Haiti (61130). (See under Sangiovanni, Vincente.)

ACADEMY OF NATURAL SCIENCES, Philadelphia, Pa.: Specimen of the type collection of the plant *Scirpus longii* (59964, exchange); miscellaneous bones of a bison, 14 dogs and 2 woodchucks (60042).

ADAMS, J. B., Stuart, Fla.: Skull of a black grouper, *Garrupa nigrita* (61063).

AGRICULTURE, DEPARTMENT OF:

Beck Compound Microscope, No. 6,553 (60641).

Bureau of Animal Industry: 1 second-stage and 2 third-stage larvæ of Diptera, *Cephenomyia* (60612).

Bureau of Biological Survey: 108 specimens of plants collected in Arizona by Mr. W. P. Taylor (59997, 60079, 60272, 60379); 16 birds, in alcohol, from British Columbia (60116); 301 reptiles and batrachians from various localities (60121); 2 crustaceans, *Hyalella azteca* from Lake Manitoba, Canada, and *Lepidurus couesii* from Idaho (60166); about 1,150 specimens of Diptera and 170 specimens of Neuroptera (60206); 59 birds, in alcohol, from British America and the Canal Zone (60241, 60252); 33 mollusks collected at the base of "Gray Sandstone" on Bright Angel Trail, Grand Canyon, Ariz., by Mr. E. A. Goldman (60307); 5 land shells from Grand Canyon and 20 specimens of plants from Arizona, collected by Mr. Goldman (61095); a small collection of fossil remains of bison and mammoth, obtained by Mr. R. C. Fulkerson near Wallula, Wash. (60376); 126 reptiles and batrachians collected in the West and Southwest, and a lamprey, *Entosphenus tridentatus*, collected by Mr. A. H. Twitchell in the lower Kuskokwim River, Alaska (60388); 29 specimens of plants collected in the southeastern United States by Mr. J. L. Peters (60415); 20 shrimps, *Artemia* species, from the mouth of Bear River, Utah, collected by Mr. Alex. Wetmore (60462); 6 lizards from Desecheo Island, P. R., collected by Mr. Wetmore, and 2 bird skeletons from

AGRICULTURE, DEPARTMENT OF—Contd. western Mexico collected by Mr. C. E. Brewster (60058); specimen of fern, *Trichomanes petersii*, collected in Alabama by Mr. Arthur H. Howell (60487); 13 specimens of plants from Oregon and North Dakota (60543); snake, *Diadophis*, from Florida (60545); 3 vials of mammal lice (60565); 5 specimens of a fern, *Dicranopteris flexuosa*, from Alabama (60591); 4 third-stage larvæ of *Cephenomyia* (Diptera) (60611); 62 specimens of plants collected in Arizona by Mr. H. H. T. Jackson (60766); 305 bird eggs and 10 nests from western America (60875); 8 branchiopods, *Apus æqualis*, from Arizona, and 3 amphipods, *Orchestia grillus* (60921); 34 reptiles and batrachians, a trout, 13 mollusks from Montana and a crayfish from South Carolina (60942); 640 birds (alcoholics, skeletons, skulls and sterna), from North America (60964); 2 turtles, 2 snakes, 2 lizards, a frog and a toad (61035); 23 reptiles from various localities (61253); 8,020 mammals collected by the Biological Survey and entered in the Museum catalogues between July 1, 1916, and June 30, 1917 (61262).

Bureau of Chemistry: Specimen of chaulmugra oil seeds, *Hydnocarpus kurzii* (60431).

Bureau of Entomology: 125 specimens, 3 species, of isopods from Texas (60006); 288 insects from the southern United States, collected by Mr. W. Dwight Pierce (60104); 84 Odonata from Chesapeake Beach, Md., collected by Mr. Rolla P. Currie and Miss Bertha P. Currie (60107); a mollusk collected on orchids from Pernambuco, Brazil, at quarantine, New York City (60141); sample of Chinese shroud cloth, "changhiong kien," manufactured from tussah silk at Kiaying chow, Kuang tung Province, China (60164); 1,232 Odonata from the vicinity of the District of Columbia (60211); 7 vials of alcoholic material of weevil, *Phytonomus posticus* (eggs, larvæ, pupæ and adults) (60224); 2 land mollusks, *Limax maximus*, received from Mr. George G. Ainslie, U. S. Entomological Laboratory, Knoxville, Tenn. (60267); 14 mollusks, taken on sugar cane at Harlingen, Tex., by Mr. T. E. Holloway (60610); 150 vials of alcoholics of early stages of Diptera, and 490 Diptera Muscoidea from New Mexico with 60 dissections of same (60616); 375 Orthoptera (60720); about 225 reared European parasitic Hymenoptera, received by the Bureau from Dr. K. Eckstein, Eberswalde, Germany (60828); 11 specimens, 3 species, of land shells from Cayey, P. R. (61009); 3 crustaceans, *Armadillidium vulgare*, from Honolulu, Hawaii (61179).

Forest Service: Model of a portion of an idealized national forest, showing the various important uses and features of administration of national forests (60139); specimen of a plant, *Aquilegia*, collected in New Mexico by Mr. W. R. Chapline, jr. (60383); 4 specimens of plants from Utah and Montana (60544, 61061).

Bureau of Plant Industry: 1,236 specimens of plants from the western United States, collected by Mr. W. W. Eggleston (59992, 60656, 60837), 129 from the United States, mainly New York and Pennsylvania (59994, 60073); specimen of a plant, *Stillingia*, from Georgia (60038); 27 agricultural products exhibited by the Chinese Government at the Panama-Pacific International Exposition, 1915 (60111); 7 specimens of plants from the vicinity of Washington, D. C. (60219), 21 from New York and Pennsylvania, collected by Mr. F. L. Mulford (60292); 2 specimens and 3 photographs of plants (60405); 548 specimens of palms (60421, 61144); 13 land shells from Lavras, Brazil, collected by Mr. B. H. Hunnicutt (60425); 105 land mollusks collected by Mr. Wilson Popenoe in the for-

AGRICULTURE, DEPARTMENT OF—Contd. est near Mazatenango, Guatemala (60488), 48 shells collected in Amatitlan, Guatemala, by Mr. Popenoe (60601); 110 specimens of plants chiefly from Utah and Nevada, collected by Mr. E. O. Wooton (60499, 61192); specimen of a plant, *Selaginella*, collected in Washington by Mr. A. C. Strathdee (60602); 251 specimens of plants collected in Alaska by Mr. J. P. Anderson (60629, 60692); specimen of a plant, *Furcraea*, from Colombia (60671); 265 specimens of plants from Alaska (60727, 60731, 60735, 60760); 798 specimens of plants, including ferns, collected in the Hawaiian Islands by Mr. A. S. Hitchcock (60730, 61215); 1,685 specimens of grasses, mainly mounted (60758, 60798, 60891, 60962, 61145, 61224); 178 specimens of plants, principally fungi, from Alaska (60776, 60855, 60925); specimen of tung oil expressed by Mr. L. P. Nemzek, from Florida-grown seed of *Aleurites fordii* (60910); 333 specimens of grasses from the Boott Herbarium (60930); 10 specimens of plants collected in North Dakota by Mr. J. T. Sarvis (60963); 6 specimens of grasses from South Carolina (61018); 50 specimens of plants collected in Nevada by Mr. F. B. Headley (61071); 2 photographs of the type specimen of a plant, *Berberis aquifolium* (61111).

AGRICULTURE, DEPARTMENT OF, HOPE GARDENS, Kingston, Jamaica (through Mr. William Harris, superintendent of Public Gardens): 3 specimens of ferns from Jamaica (60375, exchange).

AINSWORTH, Maj. Gen. F. C., U. S. Army (retired), Washington, D. C.: Scales used by Chinamen for weighing gold dust in the early days of placer mining in Idaho (60953).

ALBAUGH, IRVING S., Libertytown, Md.: Great white egret, *Herodias egretta*, from Maryland (60110).

ALBRIGHT, Mrs. JOHN J., Buffalo, N. Y.: Specimen of a plant, *Pterostyrax* (60372).

ALDRICH, FRANK W., Bloomington, Ill.: A cast each of 4 chert blades, the originals of which are the property of the donor, found in a cache of 40 on the north side of the Mackinaw River, Tazewell County, Ill. (61257).

ALDRICH, Prof. J. M., West Lafayette, Ind.: 15 Diptera (60223, exchange).

ALDRICH, T. H., Birmingham, Ala.: About 2,000 Lower Ordovician (Beekmantown) fossils from Arkansas (61108, exchange).

ALEXANDER, WILLIAM, New York City: Oil painting, "June," by John W. Alexander (60328).

AMERICAN GRAPHOPHONE Co., Bridgeport, Conn.: Collection of graphophone apparatus (61214).

AMERICAN MUSEUM OF NATURAL HISTORY, New York City: Lizard, paratype of *Cadea palirostrata*, from Cuba (60072, exchange); 2 casts of the type of the fossil bird *Diatryma gigantea* and a cast of a lower jaw of the fossil carnivore *Hyænarctos*, from Florida (60564); 3 parasitic copepods, *Pandarus sinuatus*, taken from a dogfish captured at East River, Conn., by Mr. D. C. Crawford (60632); 34 African shrews (60688, exchange); 3 cotypes of Florida Lepidoptera (60723).

AMERICAN THREAD Co., THE, New York City: A series of specimens showing the most important types of cotton threads and various ways in which these are put up for family and factory use (60289); 6 examples of tatting, crochet, embroidery, and cut work, illustrating the uses of the various mercerized and unmercerized crochet, tatting and embroidery cottons manufactured by The American Thread Co. (61066).

AMERICAN WOOLEN Co., Boston, Mass.: 3 samples of a mixed fiber skirting cloth, "Am-Wo-Cool" (60441).

AMHERST COLLEGE, Amherst, Mass. (through Prof. F. B. Loomis): A small collection of fossils from Patagonia, consisting of invertebrates (exchange), and vertebrates (gift) (60563).

AMOSKEAG MANUFACTURING CO., Manchester, N. H.: 35 samples of cotton and woolen fabrics (61300).

ANDREWS, Mrs. E. F., Theological Seminary, Va.: 13 small pieces of old 16th to 17th century French and Belgian brocaded silks (60662).

ANDREWS, Mrs. GEORGE LIPPITT, Washington, D. C.: Alabaster statuette of Antinous, with terra-cotta base (61136); flounce of black Chantilly lace (61137, loan).

ANDREWS, SUMNER, Lawrence, Mass. (through Prof. F. W. Clarke, Washington, D. C.): Gem cut from fluorite from Slope Mt., Chatham, N. H. (60275).

APOLLINAIRE-MARIE, Brother, Bogotá, Colombia: 141 specimens of plants, chiefly ferns and grasses, from Colombia (60535, 61064).

APPEL, W. D., University of Chicago, Chicago, Ill.: 85 reptiles and batrachians, 16 fishes, 40 crustaceans, about 30 annelids, 6 actinians and 4 insects, from various localities (60797).

ARCE, BONIFACIO, Bureau of Agriculture, Manila, P. I.: 2 specimens of a bird-wing butterfly, *Ornithoptera trojana* (60713).

ARENTZ, S. S., Lake View Mining Co., Salt Lake City, Utah (through Mr. Victor C. Heikes): 2 specimens of zinc ore from Promontory district, Box Elder County, Utah (60279).

ARGENTINA, COMISION DE LA EXPOSICION UNIVERSAL, 1915, San Francisco, Cal. (through Mr. Enrique M. Nelson, vice-commissioner general): 16 specimens of Argentine woods (60084); botanical specimens and samples of sawdust from Argentine forest trees, samples of quebracho extract, "yerba mate," and evaporated milk, and photographs and printed matter descriptive of Argentina (60085).

ARIZONA, UNIVERSITY OF, Tucson, Ariz. (through Prof. Byron Cummings): 3 bows, with quivers filled with arrows, from the Yaki Indians, Mexico, 1914 (61059, exchange).

ARMSTRONG, C. H., Washington, D. C.: Manatee (60504).

ARMSTRONG CORK CO., Pittsburgh, Pa.: A series of samples of corkwood and cork products (60536).

ARMSTRONG, EDWARD A., Asherton, Tex.: Large leaf-shaped flint implement from southwestern Texas (60203).

ARMSTRONG, E. J., Erie, Pa.: 100 Devonian bryozoans and brachiopods from western New York (60897).

ARSÈNE, Brother G., Calvert Hall College, Baltimore, Md.: 357 specimens of plants from Maryland (59993, 60114, 60332); specimen of a plant, *Dugesia*, from Mexico (60129).

ARTHUR, Dr. J. C., Purdue University, Lafayette, Ind.: 6 specimens of fungi from New Mexico and Florida (59969, 61204).

ASCHEMEIER, C. R., U. S. National Museum: Skin of a bobwhite, *Colinus virginianus*, from Maryland (60617); 2 gray squirrels (60667).

ASHE, VAN, Waynesville, N. C.: 2 specimens of a rhinoceros beetle, *Dynastes tityus* (60842).

ATKINS, KROLL AND CO., San Francisco, Cal.: Crystal of scheelite from the Snake Range, White Pine County, Nev. (60063).

ATLAS PORTLAND CEMENT CO., THE, New York City: 5 5-pound samples of raw and finished white cement (60484).

AUSTRALIA, COMMONWEALTH OF, DEPARTMENT OF HOME AFFAIRS, Melbourne, Australia: 2 models representing the rainfall and physiographical features of Australia, prepared at the Commonwealth Meteorological Bureau (61057).

BABCOCK, Mrs. WILLIAM HENRY (through Miss M. Frances Babcock, Providence, R. I.): Bonnet and bonnet box owned during the early part of the 19th century by Sarah Wickes Lippitt of Providence (61134).

BAGG, Prof. RUFUS M., Appleton, Wis.: Miscellaneous geological material (60029, exchange).

BAILEY, H. B., Newport News, Va.: 17 specimens, 2 species, of land mollusks taken at Mountain Lake, Giles County, Va. (60604).

BAILEY, VERNON, Bureau of Biological Survey, Washington, D. C.: About 200 mollusks from Narrows, near Malheur Lake, Oreg., collected by the donor (60411).

BAKER, C. F., University of the Philippines, Los Banos, P. I.: 25 named species of Orthoptera (60740, exchange).

BAKER, C. S., Evanston, Wyo.: 66 photographs of Indians taken over thirty years ago among the western tribes, and 2 photographs of Maj. Gen. George Crook, U. S. Army, in civil costume, one showing him with the Indians Hutchy and Al-chi-say (61160, 61246).

BAKER, Dr. F. H., Richmond, Victoria, Australia: 2 specimens, 2 species, of starfishes from Australia (60448); 6 shells, a lizard and a large bottle of insects, from Snowy River, Victoria (60669, exchange); insects from Victoria (61049); 31 mollusks from Victoria, Tasmania and New Zealand (61277).

BAKER, Dr. FRED., Point Loma, Cal.: About 25 Lepidoptera collected in Karuizawa, Japan (60239).

BALL, BRAINARD T., Miami, Fla.: Phosphate material and fossil bones from a deposit in the Florida Everglades (60350).

BALL, G. T., Washington, D. C.: An imitative form in sandstone (59989).

BALL, Mrs. W. F., Los Angeles, Cal.: 2 mollusks, *Littorina nebulosa*, from Hawaii (60478).

BARBER ASPHALT PAVING CO., THE Philadelphia, Pa.: Collection illustrating the resistivity and elasticity of asphalt, the composition of Trinidad refined asphalt, a patented paving compound, composition of asphaltic paving mixture, the uses of asphalt and sections of actual asphalt streets (60788).

BARBER, H. S., Bureau of Entomology, Washington, D. C.: 2 pairs of native shoes from Livingston, Guatemala (60881); Remington vest pocket pistol (60959).

BARBER, MANLY D., Knoxville, Tenn.: 27 mollusks from Massy Creek, Jefferson City, Tenn. (60483).

BARR, JOHN A., Citronelle, Ala.: Basket made about 1805 by John Ellis of North Carolina (60480).

BARRETT CO., THE, New York City: 10 specimens of liquid chemicals for preserving timbers (61280).

BARRY, Mrs. SARAH MARIA, and Miss ELIZABETH CUSHING WARREN, Melrose, Mass. (through Mr. Eugene B. Hagar, Boston, Mass.): An ophicleide, a large brass musical instrument used in the orchestra and in military bands (60319).

BARTELS, J. M., New York City: 5 United States 2-cent stamped envelopes issued 1915–1917 (60846).

BARTLETT, BRADFORD, Blue Ridge Summit, Pa.: Larvæ of a beetle, *Photuris pennsylvanicus* (60724).

BARTSCH, Dr. PAUL. (See under Henderson, John B.)

BEDLOW, CHARLES C., Boston, Mass.: 2 Bell hand telephones (60955).

BELL, Dr. ALEXANDER GRAHAM, Washington, D. C.: 7 diplomas and documents (60118, loan).

BELOTE, THEODORE T., U. S. National Museum: 2 United States silver dimes of the design issued in 1916 (60599).

BEMENT, CLARENCE S., Philadelphia, Pa.: 2 meteoric stones weighing, respectively, 2,940 and 2,527 grams, from Plainview, Tex., and a slice of meteoric iron weighing 1,477 grams, from Nedjed, Arabia (61074); a slice, weighing 170 grams, of the Charlotte, Dickson County, Tenn., meteoric iron (61125).

BENEDICT, J. E., jr., Woodside, Md.: Larva of a beetle, *Cybister fimbriolatus* (60101); 4 crabs, *Rhithropanopeus harrisii*, from Lower Ma-

BENEDICT, J. E., jr.—Continued.
chotoc Creek, Va. (60461); 2 large specimens of lamprey-eel, *Petromyzon marinus*, and a snake, *Lampropeltis getulus*, from Occoquan Creek, Va. (61139, 61154).

BENEDICT, NEAL, Bethlehem, Conn.: 3 skins of a tree sparrow, *Spizella monticola*, from Connecticut (60622).

BENGUIAT, Hadji EPHRAIM and MORDECAI, Edgewater, N. J.: 19 Jewish objects of religious ceremonial (60305, loan).

BENHAM, Prof. W. B., Otago University, Dunedin, New Zealand: 15 corals, a foraminifer and a bryozoan, collected at the Kermadec Islands (60112).

BENJAMIN, Dr. MARCUS, U. S. National Museum: 3 printed concert programs of 1873 and 1 of 1875 (60845).

BENNETT, Mrs. EDITH, Meadow, Utah: 2 earthenware vessels found by the donor in the ruins of a prehistoric adobe dwelling near Meadow (60191).

BENNETT, JOHN R., Deseret, Utah: Large stone pestle or roller found by the donor in the ruins of a prehistoric adobe house near Deseret (60192).

BERTAUD, Brother, St. Michael's College, Santa Fe, N. Mex.: 212 specimens of plants from New Mexico (60414).

BETHEL, Prof. ELLSWORTH, State Museum, Denver, Colo.: 4 specimens of plants from Costa Rica (60924).

BETHESDA-BLUE GRANITE Co., Washington, D. C.: Cube of granite from quarry near Bethesda, Md. (60618).

BEZZI, Dr. M., Turin, Italy: About 155 specimens, 98 species, of muscoid Diptera (60710, exchange).

BIBLE, HOWARD W., Chevy Chase, D. C.: 14 North American Indian specimens (60764, loan).

BIGELOW, Maj. JOHN, U. S. Army, Highland Falls, N. Y.: Sword frog pertaining to costume worn by John Bigelow at the court of Napoleon III when American Minister to France, 1865–1866 (60185).

BLAISDELL, Dr. F. E., San Francisco, Cal.: Paratypes of beetles, *Coniontis muscula*, *Helops simulator* and *Okanagana arestaphyla* (61109).

BLAISDELL, Dr. F. E., and L. R. REYNOLDS, San Francisco, Cal.: Pair of paratypes of a beetle, *Omus cupreoniteus*, and copy of an article in which it is described (61110).

BLISS, Miss ELIZABETH BANCROFT, Washington, D. C. (through Mrs. Julian-James): Mourning fan owned by Mrs. George Bancroft (60822).

BLOOD, GEORGE D., Salt Lake City, Utah (through Mr. Victor C. Heikes): Crystal of iron pyrite from Daly Judge mine, Park City, Utah (60281).

BODKIN, G. E., Government economic biologist, Georgetown, British Guiana: Mollusk, *Teredo megotara*, found boring in "greenheart" wood, Essequibo River, British Guiana (60972).

BOGGS, Miss A. MARIS, Bureau of Commercial Economics, Washington, D. C.: 2 specimens of gold-bearing quartz (60389).

BOGGS, Mrs. THOMAS KELLY, Flushing, N. Y.: 212 military and naval decorations and medals of foreign countries and 10 United States tokens, owned by the late Lieut. Thomas Kelly Boggs, 23d Pennsylvania Infantry, and 5 United States military badges representing his personal services and membership in patriotic societies (60638); 38 bronze, gilt and white metal United States medals, tokens and badges, and 66 bronze and white metal foreign medals and tokens, collected by Lieut. Boggs (60808).

BONAPARTE, PRINCE ROLAND, HERBARIUM OF, Paris, France (through Mr. C. Belhatte): Photograph of type specimen of a plant, *Lycopodium subulatum* (60230, exchange); 120 specimens of plants, chiefly from Mexico (60344).

BOOTH, Miss MARY A., Springfield, Mass.: 299 microscopic mounts of diatoms (60589).

BOOY, THEODOOR DE, St. Thomas, Danish West Indies: Alcoholic specimen of an agouti, *Dasyprocta agouti* (60854).

BORDAGES, L., Amiens, France: Terracotta lamp from the Mediterranean area, and a small collection of miscellaneous geological and mineralogical specimens (60117, exchange).

BOSWORTH, WILLIAM, Richmondale, Ohio: Wooden chain 9½ feet long, carved by the donor from a piece of black walnut 8 feet long (61072).

BOX, HAROLD E., The Imperial Bureau of Entomology, British Museum (Natural History), London, England: 2 specimens of a sawfly, *Dolerus triplicatus* (60747).

BOYD, Dr. NATHAN, Washington, D. C.: Oil portrait of Gen. Franklin Pierce, President of the United States, 1853–1857, by A. G. Powers (60243, loan).

BRAGG, RALF, Vero, Fla.: Indian skull from sand mound on Indian River, near Vero (61294).

BRASHEAR, Mrs. McLAIN, Washington, D. C.: 6 silver tablespoons owned by Commodore Stephen Decatur, U. S. Navy (60534, loan).

BRAZIER, L. M. (See under Mayers, Miss C.)

BREDALL, Mrs. ELISE, Solvang, Cal.: 10 specimens representing 4 species of mollusks, and 4 bronze and 2 silver coins, from Denmark (60128).

BRIDGEPORT WOOD FINISHING CO., THE (See under Northern Hemlock & Hardwood Manufacturers Association.)

BRINTON, Mrs. E. S., Washington, D. C.: 2 pairs of shoes, 3 pairs of slippers, and a white satin slipper, of the latter part of the 18th century, and a worsted pocketbook worked on canvas, of the early part of the 19th century (60446).

BRISTOW, JOSEPH Q., Newington, Va.: 8 bronze 1-centavo pieces of Mexico issued, respectively, in 1889, 1891, 1892, 1893 (2 specimens), 1900 (3 specimens), a nickel half-centesimo piece of Panama issued in 1907, and

BRISTOW, JOSEPH Q.—Continued. 19 mollusks (60586); 6 specimens of 6 species of marine shells from various localities, and a packet of mango seeds from Cuba (60948); photograph of President William McKinley (61234).

BRITISH MUSEUM (NATURAL HISTORY), London, England: 918 specimens of plants from Abyssinia, collected by Schimper (59998); 147 specimens of plants from Africa, collected by Swynnerton (60741). Exchange.

BROADWAY, W. E., Port-of-Spain, Trinidad: 12 specimens of plants from Trinidad (60009, 60293, 60408, 60650); specimen of a plant, *Rosa* (60313).

BROCKETT, PAUL, Smithsonian Institution: Silver tetradrachm of Demetrius II of Syria, issued about 144 B. C. (60600, loan); an imitation diamond (60992).

BROWN, BENJAMIN, U. S. National Museum: A miner's candlestick from Queen Copper Mine, Colo., and a tobacco pipe and package of tobacco from Saki, Japan (60494).

BROWN, EDWARD J., Los Angeles, Cal.: 229 reptiles and batrachians, 2 mammals, and a worm, from California (60124, 60290); 112 bird skins from southern California (60851); 11 sparrows of the genus *Passerculus*, from southern California (61038).

BROWN, ENU, Mobegan Lake, N. Y.: 2 snakes, *Heterodon*, from New York (60796).

BROWN, Dr. GLENN V., Bucknell University, Lewisburg, Pa.: Specimen of barite and calcite, from Milton, Pa. (60677); specimens of wavellite from Mt. Holly Springs, Pa. (60883).

BROWN, HARRY W., Glendale, Ohio: 11 specimens, 10 species, of mollusks from Florida (60368).

BROWN, Mrs. JULIUS W., Springfield, Mass. (through Dr. T. Nelson Dale): 2 soapstone pendants obtained from the gold-bearing gravels of Calaveras County, Cal., in 1869 (61119).

BROWN, LOUIS J., New York City: Bronze medal commemorating the opening of the Delagoa Bay railway, 1895; 3 coins of the South African Republic—bronze penny, 1898, silver threepence, 1892, silver sixpence, 1892; and a silver 20-pfennig piece of the German Empire, 1875 (60598, loan).

BROWN, R. M., Coast and Geodetic Survey, Washington, D. C.: Cape May warbler, *Dendroica tigrina*, from Washington (60605).

BROWN, W. L., U. S. National Museum: Bat, *Eptesicus*, from Washington, D. C. (61140).

BROWNE, HERBERT J., and H. W. VAN SENDEN, Washington, D. C.: 27 Mexican blankets and serapes (60859, loan).

BRUES, C. T., Boston, Mass.: Living specimen of a cactus, *Cereus*, and 2 photographs of cacti (60176).

BRUNER, Prof. H. L., Butler College, Indianapolis, Ind.: A skull and humerus from a shallow grave on Perico Island, Fla., and 3 fossil sponges collected in the Franklin Mountains, north of El Paso, Tex. (60574).

BRYAN, Maj. HARRY S., Denver Colo.: Hand-painted chasuble of rose silk from Mexico (60900).

BUCKLEY, WILLIAM, Staunton, Va.: Wreath placed by Confederate veterans of Stonewall Jackson Camp, Staunton, on the Federal soldiers' graves in the National Cemetery at Staunton, June 9, 1883 (61181).

BURKE, Miss FANNY, Alexandria, Va.: Wearing apparel and miscellaneous relics of Martha Jefferson Randolph and her descendants, a piece of light blue silk from a quilt used by Thomas Jefferson, and 3 chintz chair covers used at Monticello (61084, loan).

BURLESON, Mrs. ALBERT S., Washington, D. C.: Hat worn by Mrs. Burleson on the occasion of her marriage (60438, loan).

BURNSTINE, ABRAHAM, Washington, D. C.: 6 watch movements and a pocket dagger (60234); miniature of Christ, in form of a medallion, made in Moscow, Russia, in 1796 (60569); 2 Swiss lever watch movements (60984).

BURNUP, HENRY C., Maritzburg, Natal: 69 specimens, 32 species, of marine shells from South Africa, not heretofore represented in the collections of the U. S. National Museum (60492).

BURROUGHS ADDING MACHINE CO., Washington, D. C.: 2 Burroughs adding machines, No. 54 and No. 312,853 (60361, loan).

BUSCK, WILHELM, Washington, D. C.: 68 Odonata (60208).

BUSH-BROWN, H. K., Washington, D. C.: Original plaster cast of the statue of Deh-ge-wa-mis (Mary Jemison), made by the donor (60065).

BUTLER, J. B., Canaveral, Fla.: Skin and skull of a seal from Florida (60035).

CALIFORNIA ACADEMY OF SCIENCES, San Francisco, Cal. (through Miss Alice Eastwood): 796 specimens of plants (60061, exchange).

CALIFORNIA, UNIVERSITY OF, Berkeley, Cal.: Fragment of the type of a plant, *Ficus brandegei*, from Lower California (60178, exchange); microscopic slide of a protozoan, type of *Trypanosoma triatomæ* (60748); specimen of fern from Mexico (60840, exchange); brain of Ishi, California Indian (60884); mollusk, *Teredo diegensis*, from dike at Mare Island, San Francisco Bay, Cal. (61169).

CAMP, CHARLES L., American Museum of Natural History, New York City: 4 batrachians, *Batrachoseps major*, from California (60988).

CAMP, R. D., Brownsville, Tex.: 8 reptiles from Texas (60088); 64 mollusks and 5 crustaceans, collected in the islands of Cameron County, Tex., by the donor (60528).

CANADA, GEOLOGICAL SURVEY OF, Ottawa, Canada (through Dr. E. M. Kindle): 30 species of land and fresh-water shells from Lake Ontario and Greenland (60631).

CARD, GEORGE W., Sydney, New South Wales: 3 specimens of Darwin glass from Tasmania (60266).

CARNEGIE INSTITUTION OF WASHINGTON: 5 living specimens of cacti (60012); plants, insects, fishes, shells, mollusks, frogs and a pair of antelope horns, collected by Dr. and Mrs. J. N. Rose chiefly in Venezuela (60541); 227 specimens of plants from Arizona (60630, 60794, 60841, 60886, 60961, 60979); 4 albatrosses, a giant fulmar and a penguin, from the Antarctic regions (61005); 6 specimens of cacti from South America (61017, 61029); 5 photographs of cacti (61047).

CARNEGIE MUSEUM, Pittsburgh, Pa.: 24 beetles from the Isle of Pines (60105); 38 Hymenoptera (60715).

CARPENTER, BERT, Smith Flat, Cal.: Copies of portrait and autograph of James W. Marshall, discoverer of gold in California (60123).

CARR, WALTER T., Laurel, Md.: 2 hawks from Maryland (61184).

CARRE, M. B., Dover, N. J.: Combination safe lock (61117).

CARTER, Miss JENNIE D., Washington, D. C.: 3 flint arrowheads and a flint agricultural implement, from Illinois (60664).

CARTER, Miss MARY D., Washington, D. C.: Hat made by the Chemula Indians of Chiapas, Mexico (60235).

CARTER, THOMAS, U. S. National Museum: Bat, *Eptesicus* (61238).

CASADA PRODUCTS CO., Philadelphia, Pa.: Sample of Indian gum (60645).

CASH, Miss LILIAN C., Washington, D. C.: About 100 amphipods from Penobscot Bay (60161).

CAUDELL, A. N., Bureau of Entomology, Washington, D. C.: Tree-frog from the District of Columbia (60442).

CEDAR TALISMAN CO., Salt Lake City, Utah (through Mr. Victor C. Heikes): 2 specimens of willemite from Beaver County, Utah (60277).

CHACE, E. P., Los Angeles, Cal.: 5 mollusks, *Epiphragmophora traskii traskii*, from the vicinity of Los Angeles (60772).

CHANDLER, GEORGE A., University of Wisconsin, Madison, Wis.: 6 microlepidoptera, *Heliodines nyctaginella* (60712).

CHANEY, Mrs. C. L., Salem, Mass.: 25 land shells from Jamaica, West Indies (60553).

CHAPMAN, R. H., Washington, D. C.: 3 grizzly bear skins from British Columbia (60973, loan).

CHASE, Mrs. AGNES, Bureau of Plant Industry, Washington, D. C.: Specimen of a plant, *Scirpus*, from Maryland (61099).

CHASE, L. C., AND CO., New York City: 42 samples of mohair pile goods in various forms and 2 framed cards of mounted specimens showing steps in the manufacture of pile fabrics (60970); 4 samples of mohair plush representing different stages in the process of manufacture (61027); sample of mohair frieze plush showing three stages in the development of the cut pile pattern (61229).

CHAZAL, PHILIP E. (See under Shepard, Charles U.)

CHENEY BROS., South Manchester, Conn.: 9 samples of printed novelty dress fabrics, "Cinderella Silk" (60888).

CHESTER, Rear Admiral C. M., U. S. Navy, Washington, D. C.: Silver gilt service consisting of a ewer and 2 goblets presented by Thomas and James Harrison of Liverpool to Rear Admiral Chester, when commander, and his fellow officers of the U. S. S. *Galena*, in recognition of services to the British steamship *Historian*, December, 1885 (61217, loan).

CHESTNUT, FRANK, Hyattsville, Md.: 84 Odonata (60210).

CHESTNUT, GEORGE, Hyattsville, Md.: 86 Odonata from the vicinity of the District of Columbia (60209).

CHICAGO, UNIVERSITY OF, Chicago, Ill.: Types of 12 species and allotype of 1 species of Diptera described by Mr. J. M. Aldrich (60684).

CHINA, COMMISSION OF THE REPUBLIC OF, PANAMA-PACIFIC INTERNATIONAL EXPOSITION, 1915, San Francisco, Cal.: Miscellaneous collection of minerals and ores exhibited at the Panama-Pacific Exposition (60028).

CLARK, AUSTIN H., U. S. National Museum: 3 recent crinoids—a specimen each of *Comanthus novæzealandiæ* (holotype) and of *Argyrometra mortenseni* (holotype), from New Zealand, and 1 of *Compsometra serrata* from Japan (60681).

CLARK, B. PRESTON, Boston, Mass.: 100 land shells collected in July, 1916, on Mt. Kinabalu, North Borneo, between 3,000 and 8,000 feet elevation (60547); about 300 Hymenoptera from western Argentina, 100 Lepidoptera from Chanchamayo River, and a collection of Lepidoptera from Alaska (60711); a small collection of Lepidoptera from Mazatlan, Mexico, collected by Mr. J. A. Kusche, and about 2,000 insects from Mt. Kinabalu, collected by Mr. G. Haslam (60806).

CLARK, JAMES L., New York City: Skulls of 3 moose, 3 caribou, 7 mountain sheep, a mountain goat, an antelope and a Virginia deer (60660, 61225). Exchange.

CLARKE, Prof. F. W. (See under Andrews, Sumner.)

CLARKE, THOMAS W., Brookline, Mass.: Musical instrument, Monochord (Dan annam), from Haiphong, Tonkin, French China, with a sketch of the method of playing (61001).

CLEMENS, Mrs. JOSEPH, Fort Sill, Okla.: 17 specimens and a photograph of plants, from Texas (60996, 61245).

CLOKEY, IRA W., Denver, Colo.: 45 specimens of plants from Colorado (61033); 700 specimens of plants collected in Mexico and the western United States by Mr. Marcus E. Jones (61266). Exchange.

COCKERELL, Prof. T. D. A., University of Colorado, Boulder, Colo.: Collection of insects (60057); 49 bees representing 45 species, of which 10 are cotypes, type of 1 species of arachnid, types of 2 species and 1 variety of coccids, and 4 other slides of coccids (60481, exchange).

COLBURN, ALBERT E., Los Angeles, Cal.: 24 western horned owls, *Bubo virginianus pallescens*, from southern California (60890).

COLE, F. R., Bureau of Entomology, Washington, D. C.: Flies, consisting of types of *Lasiopogon drabicola*, *Metapogon pictus*, *Cophura highlandicus*, *Lestomyia redlandse*, *L. montis*, and *Nicocles lomæ*, described by the donor, and a melanistic variety of *Catabomba pyrastri* (60099); 14 muscoid Diptera (60615).

COLE, Miss LILIAN A., Union, Me.: 2 specimens of plants from Maine (61227).

COMBS, CLARK W., Washington, D. C.: 2 beaded purses of the early part of the 19th century (60189).

COMMERCE, DEPARTMENT OF:

Bureau of Fisheries: 1 type, 14 cotypes and 6 paratypes of a fish, *Germania spongicola*, from the fishing banks off Beaufort, N. C., and 5 specimens from near Tarpon Springs, Fla. (60018); 2 birds from St. George Island, Alaska (60155); 17 mammal skulls, 16 small mammals, and 17 bird skins, from Alaska (60220, 60707, 60969); 60 lots of coelenterates, 15 of sagitta, 38 of amphipods, 8 of pteropods, 44 of schizopods and 1 lot of plankton, from the fisheries schooner *Grampus* expedition of 1914 and 1915, and 51 lots of coelenterates from the *Seneca* expedition of 1914 (60174); 18 soft-shell turtles collected at the Fairport Biological Station, Iowa (60202); 10 microscopic mounts and 2 photographs of small endophytic and epiphytic algæ, from Beaufort, N. C., received through the New York Botanical Garden (60343); about 150 crustaceans from Beau-

COMMERCE, DEPARTMENT OF—Contd.
fort (60413); the type specimen of a crustacean, *Automate kingsleyi*, and the type specimen of a tardigrade, *Batillipes caudatus*, both from the vicinity of Beaufort (60513); about 2,000 miscellaneous marine invertebrates obtained in connection with the biological and hydrographic survey of the Fisheries steamer *Fish Hawk* in the Chesapeake Bay, July 11–31, 1916 (60358); 2 painted turtles from North Carolina and 2 young box turtles from Maryland (60416); about 1,000 annelids, consisting of all the types, many cotypes, a first set and numerous duplicates, made by the Fisheries steamer *Albatross* off the coast of California in 1904 and examined by Dr. J. Percy Moore, and the types of 4 species of *Spirorbis* (worms), collected by the *Albatross* off Japan and described by Miss K. Bush (60417); insects, crustaceans, mollusks, fishes, and batrachians, from North Carolina (60433); reptiles and batrachians from Iowa and vicinity (60474); about 26 specimens of *Salpa* and *Pyrosoma*—an additional part of the material in these groups collected by the *Albatross* Philippine expedition of 1907–1910 (60477); 8 sheets of algae, representing 10 species (60590); 31 small bottles and vials of plankton and 11 small fishes, from ponds, St. Paul Island, Alaska, collected by Mr. G. Dallas Hanna during the fall of 1916, and 2 amphibians from Union Bay, Vancouver Island, collected by Messrs. Hanna and Roach (60609); skins and skulls of 31 mice and shrews and a skeleton of a shrew, collected by Mr. Hanna on St. Paul Island (60896); 2 bird skeletons, a porpoise skeleton, 2 skeletons of hair seals, 4 skins and skulls and 2 odd skulls of hair seals, and skin and skull of an embryo walrus, all from Pribilof Islands, collected by Mr. Hanna (60765); 5 annelids and 10 species (about 100 specimens) of shells, collected on the island of St. Matthew, Bering Sea, Alaska, by Mr. Hanna, and received through the Bureau of Biological Survey (60943); a model each of the *Grampus*, the Great Lakes fishing steamer *Margaret McCann*, and the Bureau of Fisheries distribution car (60640); 35 fur seal skulls (60655); 11 specimens of *Turbellaria* taken from oysters collected at Cedar Keys, Fla. (60807); a few insects from Pribilof Islands (60818); type specimen of a fish, *Hymenocephalus tenuis*, collected by the *Albatross* off the Hawaiian Islands at Station 3,920 (60937); 37 specimens of a fish, *Stellifer lanceolatus*, collected by the South Atlantic Canning Co., Inc., of Fernandina, Fla. (60983); 23 soft-shell turtles from various localities (61023); about 100 specimens, 42 species, of parasitic copepods, collected by Dr. Charles B. Wilson while engaged in work at Fairport, Iowa, and other places in the Middle West (61267); 40 types and 14 other specimens of the macruroids collected by the *Albatross* during the Philippine expedition of 1907–1910 (61282).

Coast and Geodetic Survey: 8 bottles of sea-bottom samples from the coast of South Carolina, taken in 1916 by the Coast Survey steamer *Isis*, Capt. Gilbert T. Rude, commanding (61024).

COMMERCIAL MUSEUM, THE, Philadelphia, Pa.: 22 samples of cotton, silk and raffia fabrics from the French Colonies (61298).

COMMISSION OF FINE ARTS (through Col. Wm. W. Harts, U. S. Army, secretary and executive officer, Washington, D. C.): Quarter size model of the statue by Charles H. Niehaus for the Key Memorial at Fort McHenry (61126, loan).

CONNECTICUT VALLEY MANUFACTURING CO., THE, Centerbrook, Conn. (through Mr. W. H. Wright, president): Wright's patent expansion bit, for evolutionary series of the drill (61056).

COOK, Dr. O. F., Bureau of Plant Industry, Washington, D. C.: 56 specimens of plants (60398); private cryptogamic herbarium of the donor, numbering about 15,000 specimens (60831).

COOPER, Prof. WILLIAM S., University of Minnesota, Minneapolis, Minn.: 80 specimens of plants from Alaska and British Columbia (60557).

COOPER, Y. VIRGIL, Trade, Ala.: Wormsnake, *Carphophis vermis*, from Alabama (61021).

COPENHAGEN, DENMARK, UNIVERSITETETS BOTANISKE MUSEUM (through Mr. Carl Christensen): 3 specimens of ferns from tropical America (60802, exchange).

CORYELL, JAMES L., Picacho, Cal.: Specimen of dumortierite from near Picacho (60606).

COTTLE, Mrs. JULIA T., Washington, D. C.: Pair of champagne silk embroidered shoes, of the latter part of the 19th century (60437).

COUBTS, Mrs. JAMES C., Washington, D. C.: 48 ethnological specimens from the Philippine Islands, Japan and Alaska (60373).

COVERT, Mrs. MARY E., Tetotum, Va.: Part of a blue and white cotton and wool, double woven coverlet (60506).

COVILLE, FREDERICK V., Bureau of Plant Industry, Washington, D. C.: Specimen of a plant, *Gentiana porphyrio* (60359); 3 specimens of a fern, *Camptosorus rhizophyllus*, from Virginia (60732). Collected for the Museum.

COWLES, F. L., Washington, D. C.: Silver Indian Peace Medal struck during the presidency of Zachary Taylor (60658, loan).

COWLES, FREDERICK W., Washington, D. C.: California gold quarter-dollar issued in 1855 (60659).

COX, FRED AVERY, Denver, Colo.: An Indian bow and a tribe stick from the Isthmus of Darien, collected about 1855 by Fredk. Avery (60538).

COX, W. V., Brightwood, D. C.: White squirrel (60430).

CRAIG, E. G., Keswick, Va.: Small hammerstone of white quartz (60021); a Cooper revolver (60273, loan).

CRAIGHEAD, F. C., East Falls Church, Va.: 8 specimens of plants, *Centaurea*, from Virginia (60115).

CRAMER, J. GRANT, East Orange, N. J.: Uniform coat worn by Gen. U. S. Grant when a cadet at the U. S. Military Academy at West Point (61290, loan).

CRANE, W. E., Washington, D. C.: 3,115 specimens, representing 922 species, of European invertebrate fossils (60795, exchange).

CRANE, Mrs. W. MURRAY, Dalton, Mass.: Gentleman's embroidered coat of the latter part of the 18th century (60699).

CRAWFORD, Miss KATHERINE P., Washington, D. C.: A Norwegian tapestry loom, 2 tapestry squares woven by Miss Crawford, and a wooden swift from Valle Crucis, N. C. (61297, loan).

CRAWFORD, Miss MARY B., Denver, Colo.: Specimen of fern from Colorado (60995).

CUBAN OIL CO., New York City (through Mr. E. DeGolyer): Well-boring samples from 3 oil wells drilled in Province of Matanzas, near Cardenas, Cuba (61114).

CUMMINGS, HOMER H., Enfield, N. H.: Water-worn and weathered boulder (60646).

CUNNINGHAM, W. H., Webster, Mass.: Long-horn beetle, *Monohammus confusor* (60093).

CUREAN, H. M., Laurel, Md.: 3 pack baskets and a carrying-net, used by natives in lowlands of Magdalena River (60014); 14 mammals, 13 birds, 5 reptiles, 5 insects, 3 living plants and 2 shells, from Colombia, South America (60016, 60080, 61190); 24 birds from Brazil and Argentina (60031); 19 specimens, representing 10 species, of land shells from Brazil (60082); 454 specimens of plants from Argentina, Brazil, Colombia and California (60036, 60199, 60342);

CURRAN, H. M.—Continued.
650 specimens of plants from Colombia and Argentina (60041, purchase); bundle of rattan palm stems from Bolivar, Colombia, used by natives for making brooms (60199); 2 specimens of plants and 6 packets of shells, from Curaçao, Dutch West Indies (60977, 60990); portion of a snake (61249); land shell, *Ampullaria auristoma*, from the vicinity of Maracaibo, Venezuela (61279).

CURRELL, JOHN W., Washington, D. C.: Spanish bronze coin, one cuarto, struck during the reign of Ferdinand VII, 1808–1833, for circulation in the Philippine Islands (61026).

CUSTER & PALMER, Salt Lake City, Utah (through Mr. Victor C. Heikes): Specimen of tungsten ore from near Soldier, Idaho (60284).

CUTLER, Prof. IRA E., University of Denver, Denver, Colo.: Fossil bird from the Florissant Beds, Colo. (60634, loan).

DALE, Dr. T. NELSON. (See under Brown, Mrs. Julius W.)

DALL, Dr. WILLIAM H., U. S. Geological Survey, Washington, D. C.: Fungus, *Polyporus sulphureus*, from New Hampshire (60247).

DARLING, Dr. SAMUEL T., Kuala Lumpur, Federated Malay States: 2 fishes, *Betta pugnax*, and several newly hatched fry (60184).

DARTON, N. H., U. S. Geological Survey, Washington, D. C. (through Dr. T. Wayland Vaughan): 16 Tertiary fossils from Cuba (60148).

DAVIDSON, Dr. A., Los Angeles, Cal.: 11 specimens of plants from California and Arizona (60010, 60297, 60691, 60936).

DAVIS, JOHN CHANDLER BANCROFT, ESTATE OF (through Mr. James Gore King, New York City, Mr. Bancroft Davis, Boston, Mass., and Mr. Gracie K. Richards, Washington, D. C., executors): Collection of Egyptian antiquities, etc., made by Mr. and Mrs. Davis while the former was United States Minister to Germany, 1874–1877, under the

DAVIS, JOHN CHANDLER BANCROFT, ESTATE OF—Continued.
guidance of Mariette, the noted French Egyptologist (61283); cast from death mask of Oliver Cromwell (61284).

DAVIS, Dr. S. AUSTIN, Brooklyn, N.Y.: Enlarged interspinous bone of a fish (60183).

DAVIS, WILLIAM T., New Brighton, N. Y.: Holotype and allotype of *Sarcophaga cistudinis*, and a male specimen of *Cephenomyia* (Diptera) (60683).

DAVISON, J. A., Fort Myers, Fla.: 2 Indian skulls from shell mound on Captiva Island, 2 miles southwest from Fort Myers (61292).

DAY, Mrs. CHARLES, and Miss IDA HAVEN, Buffalo, N. Y.: Daguerreotype portrait of Miss Mary Abigail Fillmore, daughter of Millard Fillmore, President of the United States, 1850–1853 (60989).

DEAM, CHARLES C., Bluffton, Ind.: About 300 insects (61051); 2 specimens of goldenrod, *Solidago*, from Indiana (60552, exchange); 53 specimens of plants from Indiana (61020).

DEMING, EDWIN WILLARD, Washington, D. C.: 20 oil paintings and a bronze group of Indian subjects, by Edwin Willard Deming (60956, loan for special exhibition).

DE NEALE, Miss EDNA, Washington, D. C.: Horn-book on bone (61211, loan).

DERBY, Mrs. RICHARD, New York City: Dress worn by Mrs. Theodore Roosevelt at the inaugural ball in 1905, on the occasion of the inauguration of President Theodore Roosevelt (61199, loan).

DIAMOND, R. F., Barnwell, Cal.: Fragment of jasper showing unusual bulb of percussion (60355).

DODDS, G. S., University of Missouri, Columbia, Mo.: 301 vials of material representing 55 species of Entomostraca, collected in 124 lakes and ponds in Colorado (61153).

DODGE, CHARLES RICHARDS, East Haven, Conn.: Cranium from an Indian grave near Nashville, Tenn., and an old Spanish olive jar from southern Florida (60001).

DOLAN, JOHN J., U. S. National Museum: English copper halfpenny token issued in 1792 by Thomas Clarke of Liverpool (60071).

DOLE, DEMPSTER, Captiva Island, Fla.: Indian skull from Captiva Island (61295).

DOOLITTLE, A. A., and CLARENCE R. SHOEMAKER, Washington, D. C.: 7 samples of plankton from pools, ponds and rivers in the vicinity of Black Pond, Va., collected by the donors (60708).

DORFLINGER, C., & SONS, INC., White Mills, Pa.: Series of decorative glassware specimens—reproductions of Venetian glass and table ware. Also samples showing four stages in the manufacture of cut glass and the ingredients used both in typical crystal ware and in the standard colored glass (60789).

DOWLING, Hon. VICTOR J. (See under Emmet Statue Committee.)

DU BOIS, Capt. RICHARD CATLIN, U. S. Army (retired), Washington, D. C.: 12 archeological specimens, consisting of stone objects, a fragment of pottery, etc., said to have been found in or near an unfinished canoe on the north bank of the Susquehanna River, at Great Bend, Halstead, Pa., about 1787, near the "three Indian apple trees," where Gen. Clinton camped for the night on his way to join Gen. Sullivan (60763); 22 stone objects and fragments of pottery found at Great Bend (60954).

DUNLAP & Co., New York City: Napped beaver hat of the style of about 1840 (60501, loan).

DUNN, EMMET R., Alexandria, Va.: 9 batrachians from Virginia (60261, 60304).

DUTTON, C. N., West Palm Beach, Fla.: 11 photographs of Seminole Indians of Florida (60294).

DYER, FRANCIS J., American consul, Ceiba, Honduras: A collection of insects, 140 shells from Utilla and Roatan islands, a snake, a large seed and a vial of fungus (60244); about 1,400 insects and 2 specimens of plants (60245); 14 living specimens of cacti (60403); collections of marine invertebrates, insects, reptiles and mammals, 57 specimens of plants and an Indian relic (60444); a frog, a shell, about 100 specimens of plants and a small collection of insects (60620); 111 mollusks, 3 sponges, 4 alcyonarians, 3 stony corals, a sea-urchin, 73 specimens of plants and 6 insects, from Tela, Honduras, and vicinity (61143); 150 mollusks, 5 echinoderms, about 150 insects and a plant, from Honduras (61278). (See under Reynolds, Robert R.)

EASTMAN, Mrs. ANNIE H., and Miss FRANCINA M. MAXWELL, Washington, D. C., and Capt. W. J. MAXWELL, U. S. Navy: Teakwood furniture, East India china, lacquer ware and bric-a-brac, collected by Medical Director Charles D. Maxwell, U. S. Navy, during his cruise, 1853–1856, on the S. S. *Powhatan*, one of the ships of the squadron of Commodore M. C. Perry at the first treaty with, and opening of, Japan; Japanese swords, pictures, china, etc., collected at a more recent date by Capt. W. J. Maxwell, U. S. Navy; old English china over 100 years in the Maxwell family, and a Chinese worktable and contents (60694, loan).

EASTON, Miss JANE, Anaheim, Cal.: Land shell from "Pomgranate Ranch," Anaheim (60449).

EBERHARDT, L. V., Tillamook, Oreg.: Sandstone concretion, an imitative form (61044).

EDINBURGH, SCOTLAND, ROYAL BOTANIC GARDEN (through Prof. Isaac Bayley Balfour): 65 specimens of Himalayan plants (60011, exchange).

EDISON, THOMAS A., Orange, N. J.: Edison tin foil phonograph (59985).

EGGLESTON, W. W., Bureau of Plant Industry, Washington, D. C.: 84

EGGLESTON, W. W.—Continued.
specimens of plants, *Crataegus*, from Indiana (61060); 13 specimens of plants from New York and Vermont (60594).

ELK TANNING CO., Ridgway, Pa.: 7 specimens of tan barks collected in Bahia, Brazil, by Mr. H. M. Curran and analyzed in the laboratory of the Elk Tanning Co. (60182).

ELLICOTT, CHARLES, Dansville, N. Y. (through Hon. James W. Wadsworth, jr.): Pocket slate used by Andrew Ellicott when surveying the city of Washington in 1791 (60665).

ELLIOTT, JOHN A., Delaware College, Newark, Del.: Specimen of the type material of a fungus, *Alternaria sonchi* (60991).

ELLIS, Miss NANNIE KENT, Shawsville, Va.: Embroidered collar and pair of sleeves of 1860 (60539, loan).

ELMER, Mrs. HOWARD NIXON, Winnetka, Ill.: Green silk dressing gown worn by Gen. Lafayette during his visit to the United States, 1824–1825, white satin badge bearing his portrait, and an engraved portrait of him by Alonzo Chappel (61041, loan).

EMMET STATUE COMMITTEE (Hon. Victor J. Dowling, New York City, chairman): Bronze statue of Robert Emmet, the Irish patriot, by Jerome Connor (61286).

ERDIS, ELLWOOD C., Fort Stockton, Tex.: Rattlesnake from Texas (60187).

EVANS, ARTHUR T., University of Colorado, Boulder, Colo.: About 230 insects (60993); 50 spiders and a dragonfly, from Boulder (61228).

EVANS, J., Grant Orchards, Wash.: 11 specimens of plants from Washington (60929).

EVANS, WILLIAM T. (See under Vanderpoel, Mrs. E. N.)

FAIRCHILD, Mrs. DAVID. (See under Widler, Ely.)

FALGE, Dr. LOUIS, Manitowoc, Wis.: 2 internal casts of the fossil pelecypod *Megalomus compressus* (60454).

FARRAGUT, LOYALL, ESTATE OF (through Mr. J. Herbert Johnston and Mr. George G. Hall, executors, New York City, Rear Admiral John C. Watson, U. S. Navy (retired), and Mr. I. B. Millner, Washington, D. C.): Oil portrait of Admiral David G. Farragut, U. S. Navy, by William Swain, oil portrait of George Farragut, the father of Admiral Farragut, and miscellaneous paintings, engravings and photographs relating to the career of Admiral Farragut (61275); jeweled sword inscribed "Presented to Rear Admiral David G. Farragut by Members of the Union League Club, as a token of their appreciation of his gallant Services rendered in defence of his Country. New York. April 23d 1864." and a dress uniform coat and service belt and cap owned by Admiral Farragut (61288).

FARROW, W. MILTON, Washington, D. C.: Ballard target rifle (60152, loan).

FELIPPONE, Dr. FLORENTINO, Montevideo, Uruguay: 162 shells, chiefly land and fresh-water, from Uruguay (60033); 94 land, fresh-water and marine mollusks from Uruguay and Argentina (60809).

FEWKES, Dr. J. WALTER, Bureau of American Ethnology: 2 small copper bells said to have been found near Copan, Honduras (60913).

FIELD MUSEUM OF NATURAL HISTORY, Chicago, Ill.: Slice of the Los Reyes meteorite (61258, exchange).

FISHER, Dr. A. K., Bureau of Biological Survey, Washington, D. C.: 2 copperhead snakes from Maryland (61247).

FISHER, GEORGE L., Houston, Tex.: 46 specimens of plants from Texas, California and Louisiana (60333, 60934); 282 specimens of plants (61015, exchange).

FISHER, L. B., Northfield, Minn.: 2 specimens of plants, *Laciniaria*, from Minnesota (60259).

FISHER, R. I., Wagon Wheel Gap, Colo. (through U. S. Geological Survey): Type specimens of the mineral creedite (61089).

FLORIDA STATE GEOLOGICAL SURVEY, Tallahassee, Fla. (through Dr. E. H. Sellards, State geologist): 22 species of land and fresh-water fossil mollusks from Florida (60172); 350 Pleistocene marine fossils from Vero, Fla. (60857).

FOLSOM, J. W., University of Illinois, Urbana, Ill.: Cotypes of Thysanoptera—*Onychiurus similis, subtenuis, pseudarmatus, ramosus* and *pseudofimetarius*, and determined material of *O. armatus* and *O. fimetarius* (60546).

FOOTE, Dr. J. S., Creighton University, Omaha, Nebr.: 4 human skulls (60019).

FOSHAG, WILLIAM, Berkeley, Cal.: Specimen of wilkeite with associated minerals (60468, exchange).

FRACHTENBERG, Dr. LEO J. (See under Rixon, Mr. and Mrs. Theodor F., and Taylor, Mrs. Fannie.)

FRACKER, S. B., Madison, Wis.: Weevil, *Cholus cattleyæ* (60717).

FRANCIS, Miss MARY E., Oberlin, Ohio: 13 specimens of plants from Florida (60834).

FRANKLIN, Dr. H. J., East Wareham, Mass.: Paratype of an ichneumonfly, *Campoplex variabilis* (60212).

FRANKLIN PRINTING CO., Philadelphia, Pa.: 2 copies of a facsimile of "The Pennsylvania Gazette," June 19 to June 26, 1732, printed upon paper made in the "Ivy Mill" about 1798 (60406).

FRENCH, Mrs. AARON, Washington, D. C. (through Mr. Neil M. Judd): 4 folio albums (8 volumes) entitled Mr. Vanderbilt's House and Collection, and 2 photogravures and 2 engravings, presented by Mrs. French as a memorial to her daughter, Mary Adelaide French (60523).

GAILLARD, Mrs. DAVID DUBOSE, Elizabeth, N. J.: Ethnological specimens of the Western Hemisphere and a pandanus mat from Hawaii (60782, loan).

GAINES, MARSHALL R., Yonkers, N. Y.: 2 mollusks, *Thais trinitatensis*, from Puerto Cortez, Honduras (60439).

GALBRAITH, CHARLES E., Knoxville, Tenn.: Specimen of manganese ore from Blount County, Tenn. (60582).

GAME & FISH COMMISSION, Frankfort, Ky. (through Mr. J. Quincy Ward, executive agent): 2 fresh-water medusæ from Benson Creek, Kentucky River (60445).

GARRETT, A. O., Salt Lake City, Utah: 2 living specimens of cacti, *Opuntia*, from Utah (60399).

GARST, Rear Admiral PERRY, U. S. Navy, Washington, D. C.: 6 hanks of raw abacá fibre and 3 grades of nested and tied abacá, purchased from natives at the Port of Boac, Island of Marinduque, P. I. (60013); 37 walking sticks, turned from various woods of the Philippine Islands (60126, loan).

GIANINI, CHARLES A., Poland, N. Y.: Specimen of a plant, *Androsace*, from Alaska (60322).

GIERSCH, Mrs. R. F., Raleigh, N. C.: 2 examples of pine needle basketry, and a pine knot and burrs from loblolly pine (60457).

GIFFARD, W. M., Honolulu, Hawaii: 123 wasps (60106).

GILBERT, J. Z., Los Angeles, Cal.: Sample of diatomaceous earth from Los Angeles (60440).

GILLETT, Miss AMARYLLIS, Washington, D. C.: Pair of white kid gloves worn by the donor at a reception given in Chicago in 1880 by the Society of the Army of the Tennessee, in honor of Gen. Grant and Gen. Sherman (60907); English riding habit consisting of black broadcloth skirt and jacket, and a pair of leather boots (61133).

GLENN, M. L., Erie, Pa.: 5 specimens of stevensite and associated minerals, from Essex County, N. J. (60140).

GLOVER, JAMES E., Barranquilla, Colombia: Specimen of leaf-hopper, *Laternaria servillei* (61064).

GODFREY, Brig Gen. E. S., U. S. Army (retired), Cookstown, N. J.: European starling, *Sturnus vulgaris*, from New Jersey (60633).

GODING, FREDERIC W., American consul general, Guayaquil, Ecuador: 2 lizards, 2 snakes and some scorpions, from South America (60941).

GORDON, SAMUEL G., Philadelphia, Pa.: Specimen of calcite, variety argentine, and stilbite on granite-gneiss, from Delaware County, Pa. (60917).

GORMAN, M. W., Portland, Oreg., and Prof. C. V. PIPER, Washington, D. C.: 41 specimens of plants from the Howell Herbarium (60327, 60729).

GOUCHER COLLEGE, Baltimore, Md.: A collection consisting of 75 specimens of cycads, and 84 identifiable specimens and 59 fragmentary pieces of fossil vertebrates (60460, loan).

GOUDREAU, A. A., Huntington, Mass.: Male specimen of common walking stick, *Diapheromera femorata* (60253).

GOUVERNEUR, Miss MAUDE CAMPBELL, Washington, D. C.: 5 china teacups and 6 saucers of about the middle of the 19th century (60781, loan).

GRAVES, E. W., Long Island, Ala.: 4 specimens of a fern, *Trichomanes petersii*, from Alabama (60554, exchange); 4 specimens of ferns from Georgia (61014, 61162).

GRAY HERBARIUM. (See under Harvard University.)

GRAY, R. L., Newfoundland, Ky. (through U. S. Geological Survey): Sandstone cast of a fossil plant, *Sigillaria* (60061).

GREAT SOUTHERN GRAPHITE CO., Birmingham, Ala.: Sample of flake graphite from Clay County, Ala. (60825).

GREEN, Dr. JAMES, Parowan, Utah: 3 human skulls and a jaw bone, found by the donor while digging trenches near the ancient iron mounds at Paragonah, Utah (60193).

GREER, R. H., Daggett, Cal.: Specimen of cuprodescloizite (60348).

GRIGGS, Prof. ROBERT F. (See under Ohio State University.)

GROUT, Dr. A. J., New Dorp, N. Y.: 42 specimens of mosses, chiefly from the western United States (60653, exchange).

GUDGER, E. W., Greensboro, N. C.: 10 worms collected at Waynesville, N. C. (60288).

GUNTHER, C. F., Chicago, Ill.: Oil portrait of Major Andre, by Sir Thomas Lawrence (59988, loan).

HAGAR, EUGENE B. (See under Barry, Mrs. Sarah Maria.)

HALSALL, WILLIAM F., Provincetown, Mass.: 2 oil paintings by William F. Halsall—"The Song of the Sea" (60639); "Our Glory—Battleship Oregon" (60821, loan).

HAMBLIN, Mrs. D. P., Vienna, Va.: Liquor set of 13 pieces in oak chest, owned during the War of 1812–1815 by William P. Hamblin of Massachusetts (60568).

HANDY, L. C., Washington, D. C.: Photograph of Maj. Gen. George A. Custer, U. S. Volunteers, from an original negative made by M. B. Brady during the Civil War (61042).

HANNA, W. C., Colton, Cal.: 2 nests and 6 eggs of the white-throated swift *Aëronautes melanoleucus*, from California (60163).

HANNAFORD, HOWARD, Tokyo, Japan: Specimen of a plant, *Dicentra tenuifolia*, from Japan (60321).

HARBECK, H. S., Philadelphia, Pa.: Types of 6 species of Diptera described by Mr. J. M. Aldrich (60686).

HARDING, Mrs. G. CLYDE, El Paso, Tex. (through Miss Mabel T. Harding, Chicago, Ill.): Spanish silk shawl (60270).

HARKINS, T. E., Fowl River, Ala.: Toad, *Bufo lentiginosus*, from Alabama (59990).

HARLEY, W. N., Fort Myers, Fla.: Indian skull from shell point at mouth of Caloosahatchee River, Fla. (61293).

HARMON, G. G., Mims, Fla.: 2 sections of tree trunk showing attempts to heal over decayed portion (60197).

HARPER, FRANCIS, Bureau of Biological Survey, Washington, D. C.: 2 turtle skulls from Florida (61248).

HARRING, H. K., Washington, D. C.: 80 mollusks from swampy parts of Lake Kawaguesaga, Wis., collected in 1916 by the donor (60410).

HARRINGTON, DANIEL, Bureau of Mines, Butte, Mont. (through Mr. George S. Rice, Washington, D. C.): Distal half of a median metatarsal of the right hind foot of a plant-eating dinosaur (60947).

HARRIS, CHARLES, Macomb, Ill.: Skull of an adult male Indian, from a mound near Duncan, Ill. (60903).

HARRIS, T. C., Baltimore, Md.: A Bacon revolver (60463).

HARRISON, Dr. CARRIE, Brookland, D. C.: Cotton appliqué quilt pieced by Louise Ward in 1854 and quilted in 1858, and a blue and white plaid blanket, the wool of which was raised, carded, dyed indigo and handwoven by the donor at the age of 14 (61242).

HARVARD UNIVERSITY, Cambridge, Mass.:

Cryptogamic Herbarium: 230 specimens of marine algæ (60895, exchange).

Gray Herbarium: 2,274 specimens of plants (60987, 61146); 194 specimens of ferns collected in Cuba by Mr. Charles Wright (61013); 782 specimens of plants chiefly from New York and Newfoundland (61121). Exchange.

Museum of Comparative Zoölogy: 2 bats, *Erophylla*, and a hutia, *Capromys*, from Cuba (60188, exchange).

HATFIELD, A., jr., New York City: 86 postage stamps of Colombia and 41 of various native Indian States (61185).

HAVEN, Miss IDA. (See under Day, Mrs. Charles.)

HAVENSTRITE, WILLIAM LYNDALL, New York City: Miniature United States silk flag made during the early part of the 19th century (60521, loan).

HAWES, B. O., Warrenton, Va.: Book entitled "Whig against Tory," published in 1832, containing early American wood engravings, and a mimeograph print made in 1895 (60537).

HAWES, B. O.—Continued.

HAWKES, T. G., & Co., Corning, N. Y.: 28 specimens portraying the development of the cut glass industry (61165).

HAY, Dr. O. P., Washington, D. C.: A small collection of fossil bones and teeth from Vero, Fla. (60500).

HEIGHWAY, A. E., New York City: Specimens of pink tourmaline from California and staurolite from Georgia (60450).

HEIKES, VICTOR C., U. S. Geological Survey, Salt Lake City, Utah: 7 specimens of ores, including zinc, copper and carnotite, from localities in Utah, Nevada and Idaho (60276). (See under Arentz, S. S.; Blood, George D.; Cedar Talisman Co.; Custer & Palmer; Kearns, Thomas; Parker, W. H.; Pembroke, E. R.; Pett, Imer; and Williams, Frank.)

HELLER, A. A., Chico, Cal.: 28 specimens of plants from California and Oregon (60510).

HENDERSON, JOHN B., Washington, D. C.: 6 fishes collected by the donor on the Florida reefs off Key West (60027); about 150 insects, 150 miscellaneous marine invertebrates, 15,000 mollusks, 100 Tertiary fossil mollusks, 266 fishes, 214 reptiles and batrachians, 30 bird skins, 86 alcoholic birds, 30 plants, 2 scorpions, 4 myriapods, 4 bird eggs, a bat, 2 mice and 2 vertebrate bones, collected by the donor and Dr. Paul Bartsch in Cuba and Haiti (60186, 61226); about 90 marine invertebrates collected at Sand Key, Fla. (60800).

HENDERSON, JOHN B., and Dr. PAUL BARTSCH, Washington, D. C.: 2 specimens of top-minnow, *Gambusia picturata*, collected in Santa Cruz River, Cuba (60026).

HENDERSON, Judge JUNIUS, University of Colorado, Boulder, Colo.: 59 specimens, 12 species, of molluska, a representative series of the genus *Orcoheliz*, secured in Utah and Idaho (60005).

HENNESSY, J. C., Palmetto, Fla.: Tooth of an extinct elephant, *Elephas imperator*, from Palmetto (60790).

HENRI, JOHN R., Pleasant Ridge, Ohio: 75 Upper Ordovician fossils from southwestern Ohio (60811).

HEWETT, D. F., U. S. Geological Survey, Washington, D. C.: A collection of vanadium ores from Peru (60362, collected for the Museum).

HEYE, GEORGE G., Museum of the American Indian, New York City: Bones of mammals, birds, reptiles and fishes, from kitchen middens in Santo Domingo, the Virgin Islands and Porto Rico, collected by Mr. Theodoor de Booy (60394, 61243).

HILPIN, Miss E. M., Washington, D. C.: Sponge, Venus flowerbasket, *Euplectella owensi* (61265).

HINE, Prof. J. S., University of Ohio, Columbus, Ohio: Types of 9 species of Diptera described by Mr. J. M. Aldrich (60685).

HINKLEY, A. A., Du Bois, Ill.: 5 molluska, *Hemisinus ruginosus*, from Lake Izabal, Jocolo, Guatemala (61118).

HODGE, F. W., Bureau of American Ethnology: 4 Zuñi prayer-sticks, presented to the donor by Mrs. Frank Hamilton Cushing (60317).

HOES, GOUVERNEUR, Washington, D. C.: Open-face gold watch with silver dial, in a hardwood case inlaid with brass (61186, loan).

HOES, Mrs. R. G., Washington, D. C.: 25 military, 8 naval, and 41 miscellaneous buttons, and a bronze handkerchief holder of the early part of the 19th century (60784); button set with brilliants and a silvered steel button (60823); beaded bag owned by Mrs. James Monroe (60908); maroon-colored watered silk and velvet dress, consisting of a skirt and 2 bodices (61022); camel's hair shawl owned by Mrs. Samuel Laurence Gouverneur, jr. (Marian Campbell) (61138). Loan. (See under Richardson, Mrs. Charles W.)

HOES, Mrs. R. G.—Continued.

HOLLAND, CHARLES GORDON, U. S. Navy: 30 marine invertebrates, a scorpion, 13 fishes and 4 amphibians, from Panama (60512).

HOLLESEN, JOHN P., Santo Domingo, West Indies: Carved stone pestle from Santo Domingo (60158, loan); 8 weapons from Santo Domingo (61030).

HOLLISTER, N., National Zoological Park: Skeleton of red-eyed vireo, *Vireosylva olivacea* (60386).

HOLT, E. G., Bureau of Biological Survey, Washington, D. C.: Shell and skull of a turtle from Alabama (60654); 2 turtles from the District of Columbia (61065); mollusk, *Polygyra albolabris*, from Eastern Branch, D. C. (61129).

HOLT, Miss WINIFRED (through Mrs. Julian-James): Silver and bronze bonbonniere decorated with a portrait of Francis Joseph I, Emperor of Austria (61213).

HOPE GARDENS. (See under Agriculture, Department of, Kingston, Jamaica.)

HORTON, W. S., Hugo, Okla.: Concretion suggesting a life form (60351).

HOUGH, F. C., Morgantown, W. Va.: Stone celt found at Mount Pleasant, Pa. (60495).

HOWELL'S MICROCOSM, Washington, D. C.: Small meteoric stones from Holbrook, Ariz., weighing about 3,000 grams, and a specimen of the Plainview, Tex., stone, weighing 4,592 grams (60819); a complete individual weighing 60 pounds, 2 ounces, and a cut slice weighing 8 pounds, 2 ounces, of Canyon Diablo meteoric iron (60938). Exchange.

HOY, CHARLES M., Rochester, N. Y.: Skull of a Chinese water-deer (60381); skull of a wild boar (61100).

HRDLIČKA, Dr. ALEŠ, U. S. National Museum: 2 Indian skulls collected by the donor from crude old box burials, 16 miles S. S. E. of Fort Yates, N. Dak. (59976); 3 young terrapins from the District of Columbia (60204); Chippewa birch bark writing, collected by the donor at White Earth Reservation, Minn., in the spring of 1916 (60233).

HUBBARD, Mrs. KATHERINE E., Washington, D. C.: Handkerchief owned by Queen Anne of Great Britain, 1702–1714 (60957, loan).

HURTER, JULIUS, sr., St. Louis, Mo.: 2 lizards from Cuba, 2 salamanders from Massachusetts and 9 batrachians (60087, 60323, 61251); Mr. Hurter's entire private collection of reptiles and batrachians, comprising 3,575 specimens, together with a few fishes (60893, bequest).

HYACINTH, Brother F., Ammendale, Md.: 50 specimens of plants from Maryland (60113).

HYDE, A. G., & SONS, New York City: Sample of sateen lining, "Durasatin" (60062).

HYDE, FREDERIC BULKELEY, Washington, D. C.: Dress worn by the donor when a child, and a pair of white kid shoes worn by his mother, Elizabeth Whitney Bulkeley, on the occasion of her marriage to Rev. Frederick S. Hyde at Southport, Conn., Oct. 13, 1870 (60703).

HYDRO-STONE Co., Chicago, Ill.: 3 concrete building blocks, 2 with face finished in imitation of granite and 1 with face of white sandstone (60485); 16 wooden models of styles of concrete blocks, 7 photographs of buildings using concrete blocks, and 4 concrete blocks (60777).

ILLINGWORTH, J. F., College of Hawaii, Honolulu, Hawaii: 30 miscellaneous insects from Hawaii and Fiji (60221).

ILLINOIS STATE LABORATORY OF NATURAL HISTORY, Urbana, Ill.: 13 beetles, Cassididæ (60718).

ILLINOIS STATE MUSEUM OF NATURAL HISTORY, Springfield, Ill.: Miscellaneous collection of geological and mineralogical material (60056, exchange).

ILLINOIS, UNIVERSITY OF, Urbana, Ill.: 4 specimens of meteorites—Bridgewater, 32 grams; Ft. Pierre, 38 grams; Klein Menow, 108 grams; and Murphy, 576 grams (60374, exchange).

INDIA, THE GOVERNMENT OF, Calcutta, India (through Mr. H. H. Hayden, director, Geological Survey of India): 5 casts of *Sivapithecus indicus*, for exhibition series illustrating man's antiquity (59974).

INTERIOR, DEPARTMENT OF:

3 puma skulls and 4 skins, 43 coyote skulls and 16 skins, 3 wolf skulls and 2 skins, 5 bison skulls and a skin, a black bear skull and skin and a badger skull, received from Yellowstone National Park (60017, 60150).

Bureau of Mines: Model of charcoal blast furnace and by-product plant of the Pioneer Iron Co., Marquette, Mich. (61256).

U. S. Geological Survey: 44 samples from Searles deep well, Searles Lake, Cal., described in Survey Bulletin 580–L, a specimen of tamarugite from Red Cap, Utah, 17 specimens of hinsdalite from the Golden Fleece Mine, near Lake City, Colo., and 36 rocks and minerals from foreign localities (59978); 2 examples of commercial magnesium metal, from the Electric Production Co., New York City (59991); about 500 Silurian invertebrates from Maine, including the types and figured specimens illustrated in the Eastport Folio, No. 192, Geologic Atlas of the United States, and in a manuscript paper by Mr. H. S. Williams entitled "Contributions to the geology of Maine, No. 13, Nummulites from the Silurian formation of Washington County, Maine" (60040); 10 specimens of pegmatite from the Rutherford Mica

INTERIOR, DEPARTMENT OF—Continued. Mine, Amelia, Va., and gem minerals from the southern California tourmaline field, collected by Mr. W. T. Schaller (60044, 60824); 4 cases of marbles from east Tennessee and rock specimens from Vermont, collected by Dr. T. Nelson Dale (60058); a chest of thin sections, from Dr. Dale (61067); a collection of vertebrate fossils obtained by Mr. L. F. Noble in the Grand Canyon of Arizona, consisting of amphibian or reptile tracks from the Coconino sandstone and Devonian fish remains from the Temple Butte limestone (60064); 2 bars of magnesium metal, produced by the Norton Laboratories, New York City (60075); 436 specimens illustrating the economic geology of Gilpin and adjacent portions of Clear Creek and Boulder Counties, Colo., described in Professional Paper 94 by Mr. Edson S. Bastin and Mr. James M. Hill (60171); 50 minerals illustrating the genesis of the zeolite deposits of New Jersey (60173); specimen of wolframite from New Brunswick, and a suite of specimens showing the occurrence of scheelite, from the property of the Nevada Scheelite Co., Minerva district, Shoshone, Utah (60175); 32 geological specimens from the Darwin district, Inyo County, Cal., and 17 specimens from quicksilver deposits near Mina and Beatty, Nev., described by Mr. Adolph Knopf in Survey Bulletins 580–A and 620–D (60201); a set of mineral specimens relating to gems and precious stones and 7 stone hammers and sledges from ancient turquoise mines, collected by Mr. D. B. Sterrett (60364); 5 minerals, mostly types, from Colorado, and a collection of rocks from Oklahoma described by Mr. Charles H. Taylor in Bulletin 20, Oklahoma Geological Survey (60370); 173 specimens of plants collected in Alaska during 1916 (60486); specimens of the minerals coquimbite and copiapite, sent to the Survey by Mr. J. D. Garinger, Daggett, Cal. (60533); specimens of soda minerals produced by evaporation of water from Owens Lake, Cal., from the soda plant at Keeler, Cal., donated to the Survey by Dr. Carl Elschner, San Francisco (60697); a small collection of geological specimens from Golden Arrow and Clifford districts, Nev., described in Survey Bulletin 640–F (60752); miscellaneous ores and rocks from western mining districts (60769); a small collection of reptilian remains obtained by Mr. E. T. Hancock in the area northwest of Billings, Mont. (60778); 3 samples of vegasite, a newly recognized mineral from the Yellow Pine District, Nev., described in Vol. 5, Journal of the Washington Academy of Sciences (60810); rocks and ores to illustrate Survey Bulletins 640–G and 640–L, Professional Paper on a geologic reconnaissance of the southern Sierra Nevada escarpment and the Inyo Range, Cal., and Professional Paper on the geology and ore deposits of the Yerington District, Nev.; and 18 boxes of thin sections (60848); remains of an Eocene fossil bird collected by Mr. Dean E. Winchester 3 miles southeast of Ephraim, Utah (60849); 6 boxes of thin slices of rocks from the Deming quadrangle and other parts of Luna County, N. Mex., described in the Deming Folio (in press) and Survey Bulletin 618 (60850); rocks collected in California by Mr. N. H. Darton in 1906 and 1914, with thin sections, described in Survey Bulletin 613 and in a bulletin in preparation (60858); thin slices and rocks from Luna County and the Deming quadrangle, N. Mex., collected by Mr. Darton (60945); rocks from the Syracuse and Lakin quadrangles, western Kansas, described in a folio in course of publication, and a specimen of Tertiary grit from Kinsley, Kans., and of Niobrara (Timpas) limestone from Granada, Colo., collected by Mr.

INTERIOR, DEPARTMENT OF—Continued.
Darton (60946); marbles from southeastern Alaska, collected by Mr. E. F. Burchard in 1912 and 1913, illustrating a bulletin submitted for publication and preliminary reports published in Survey Bulletins 542 and 592 (61083); 63 rock and ore specimens from the Santa Rita and Patagonia Mountains, Ariz., described in Survey Bulletin 582, and 28 rock and ore specimens from the Rochester District, Nev., described in Bulletin 580–M (61087); a collection of rocks and ores to illustrate a Survey bulletin on "the geology and mineral deposits of the Colville Reservation, Washington," by J. T. Pardee (61088); type specimens of minerals described by Mr. E. S. Larsen and associates (61093); 140 drawers of Tertiary invertebrates, mostly from the Pacific coast of the United States (61102); 150 specimens of ores and minerals from the Santa Rita and Patagonia Mountains, Ariz. (61106); 3 specimens of zinc carbonate and silicate (61124); minerals from Paterson, N. J. (61147); rocks and minerals from San Diego County, Cal. (61148); 10 types of Carboniferous insects from Pennsylvania and a type of a Tertiary insect from Colorado, described by Prof. T. D. A. Cockerell (61202).

Office of Indian Affairs (through Mr. W. M. Peterson, superintendent, Fort Apache Indian School, Whiteriver, Ariz.): Pair of ancient shoes of the Pueblo Indians, used for walking on snow or over boggy places (60877).

National Park Service: 40 oil paintings illustrating scenes mainly in the National Parks and Monuments of the United States, installed in the National Gallery of Art on the occasion of the meeting of the National Parks Conference in the National Museum, January 2, 1917 (60771, loan for special exhibition); archeological material collected by Dr. J. Walter Fewkes in the summer of 1915 during excavations conducted at Oak-Tree House, Mesa Verde National Park, Colo., under the joint auspices of the Department of the Interior and the Bureau of American Ethnology (60901); archeological material collected by Dr. Fewkes in the summer of 1916 during excavations conducted at Mummy Lake Ruins, Mesa Verde National Park, under the joint auspices of the Department of the Interior and the Bureau of American Ethnology (60880).

JAMES, Mrs. JULIAN–, Washington, D. C.: One lot of lead bullets (60295); 3 bullet molds (60642); a crocheted cap and a baby's linen cap of the early part of the 19th century (60785, loan); miniature model of Japanese Samurai with attendant (60839, loan); 2 Japanese picture frames (60912, loan); mahogany claw-foot elbow table (61200, loan); commission of Sidney Mason as consul at St. Johns, P. R., dated March 18, 1830, signed by President Andrew Jackson and Secretary of State Martin Van Buren, and 2 Masonic aprons owned by Lieut. Commander Theodorus Bailey Myers Mason, U. S. Navy (61276, loan); commission of Col. Willoughby Morgan, U. S. Army, as captain, 12th Regiment, U. S. Infantry, dated July 23, 1812, his oath of allegiance dated October 23, 1812, and a letter written by him dated June 16, 1815 (61289, loan). (See under Bliss, Miss Elizabeth Bancroft; Holt, Miss Winifred; and Zimmerman, Mrs. Margaret E.)

JANDORF, MORTON L., York, Pa.: Specimen of wavellite from Mt. Holly Springs, Pa. (60678).

JENNEY, Dr. W. P., Washington, D. C.: Oyster with attached pearl, purchased in Center Market, Washington (60082).

JEPSON, Prof. WILLIS L., University of California, Berkeley, Cal.: 105 specimens of plants from California (60870, 60950).

JEWETT, Miss ELIZABETH, Washington, D. C.: 2 dolls and a doll's trunk containing clothes and accessories, of the latter part of the 19th century (60471, loan).

JIMÉNEZ, OTÓN, San José, Costa Rica: Specimens and photographs of a plant, *Werckiea insignis*, from Costa Rica (60524, 60648).

JOHNS HOPKINS UNIVERSITY, THE, Baltimore, Md. (through Dr. E. A. Andrews): Alcoholic mammals, reptiles, batrachians and a bird, collected by the Baltimore Geographical Society in the Bahamas in 1903 (60583).

JOHNS, Miss ROSALIE VAN D., Washington, D. C.: Pair of black lace mitts worn at a reception given in honor of Gen. Lafayette at Newcastle, Del., during his visit to the United States, 1824–1825 (61231).

JOHNSON, COWDIN & Co., New York City: 13 samples of novelty silk ribbons (61205).

JOHNSON, FRANK A., Wilcox, Pa.: Fruit of a fossil plant, *Trigonocarpus*, from the Coal Measures at Butler, Pa. (61197).

JOHNSON, RALPH CROSS, Washington, D. C.: 3 oil paintings (61301, loan).

JOHNSON, T. L., Spruce Pine, N. C.: Specimen of quartz (60347).

JOHNSTON, EARL LYND, Fort Lupton, Colo.: 250 specimens of plants from Colorado (60125, 60291, 60436).

JOHNSTON, Rev. JOHN T., Berkeley Springs, W. Va.: 5 fresh-water mollusks, *Lampsilis ventricosus*, from Berkeley Springs (61079).

JOHNSTON, Dr. M. C., Aberdeen, S. Dak.: Male specimen of a dragonfly, or damselfly, *Agrion maculatum* (60094).

JONES, FRANK M., Wilmington, Del.: Types of insects, *Metriocnemus edwardsi* and *Botanobia darlingtoni* (60098).

JONES, Prof. J. CLAUDE, University of Nevada, Reno, Nev. (through Dr. T. Wayland Vaughan): 9 specimens of calcium carbonate deposits from Pyramid Lake and vicinity, Nev. (60680).

JONES, MARCUS E., Salt Lake City, Utah: 5 specimens of cacti, *Echinocactus whipplei* (61240).

JONES, Dr. MARK. (See under King, Samuel L.)

JORDAN, ERIC KNIGHT, Stanford University, Cal.: 23 specimens, 3 species, of mollusks from California (60345, exchange).

JOYCE, ROBERT E., Washington, D. C.: Child's shoe of the Colonial period (61046, loan).

JUDD, NEIL M., U. S. National Museum: War club of the Tewa Indians, San Ildefonso, N. Mex., presented to the donor in 1910 by Juan Cruz Montoya, governor of Ildefonso pueblo for that year (60231); shallow stone mortar found by the donor near Glen Echo, Md. (60391). (See under French, Mrs. Aaron.)

JUMP, E. R., Newton, Mass.: Plaster cast of a stone pipe found at Brant Rock, Marshfield, Mass., in the summer of 1914 (60318).

KEARNS, Hon. THOMAS, Salt Lake City, Utah (through Mr. Victor C. Heikes): Carnotite ore from 160 miles south of Thompson, Utah (60278).

KEEFER, ARTHUR, U. S. Department of Agriculture, Washington, D. C.: Snake from Maryland (60059).

KEITH, M. L., Auburn, Me.: Specimen of feldspar enclosing green tourmaline (60419).

KELLERS, H. C., U. S. Navy, Pago Pago, Tutuila, Samoa: 3 skulls from old graves in the suburbs of Honolulu, Hawaii, received through Dr. J. C. Thompson, U. S. Navy (60573); 128 land reptiles and about 500 shells, Achatinellidæ, from the Hawaiian Islands (61094).

KEMERER, E. M., Aurora, Mo.: Luna moth, *Tropaea luna* (59979).

KENNEDY, C. H., Cornell University, Ithaca, N. Y.: About 166 adult dragon flies, 23 nymphs and 58 exuviæ, including 29 species of which 8 are types (60109).

KENNEDY, Miss MAY S., Baltimore, Md.: White moiré silk dress, lace veil, handkerchief and shoes, worn by

KENNEDY, Miss MAY S.—Continued.
Miss Harriet Lane on the occasion of her marriage to Henry Elliot Johnston (61045).

KENTUCKY, UNIVERSITY OF, Lexington, Ky. (through Prof. Arthur M. Miller): Figured specimen of fossil alga, *Stromatocerium rugosum* (60363).

KETTLE RIVER Co., THE, Minneapolis, Minn.: Block of Kettle River stone (60542).

KEYSER, E. W., Washington, D. C.: Black earthenware bottle from Santo Domingo pueblo, N. Mex., and a fragmentary stone pipe bowl found in 1872 on St. James Island, Gulf coast of Florida (60242); 100 miscellaneous ethnological specimens, and a Spanish powder bag from arsenal at Fort Santiago, Cuba, 1898 (60354, exchange); 2 camphine lamps, period about 1830 (60570); Apache Indian basket-jar from Arizona (61235, loan).

KILLIP, ELLSWORTH P., Rochester, N. Y.: 83 specimens of ferns, mainly from Jamaica (60180, 60503).

KING, Mrs. HORATIO, Washington, D. C.: Cutlass, linen bag, 8 pieces of wearing apparel, comb, 5 parasol tips of the early part of the 19th century, pair of shoes from Tunis, Africa, part of a telegraph machine, and a flax wheel from Edinburgh, Scotland (60786).

KING, Mrs. HORATIO, and Mrs. L. C. TALBOTT, Washington, D. C.: 7 daguerreotypes and an ambrotype (60519).

KING, SAMUEL L., Bristol, Tenn. (through Dr. Mark Jones, Dresden, Ohio): Fragments of 2 skulls in hard shell concrete and some archeological objects, from Demarest Key and Buck Key, west coast of Florida (60572).

KIRK, Dr. EDWIN, U. S. Geological Survey, Washington, D. C.: Tulare Indian basket (60835, loan).

KLAKRING, ALFRED, Washington, D. C.: 6 engravings, 19 chromolithographs and a newspaper (60396).

KNOWLES, W. A., U. S. National Museum: 2 small portions of bread used in the Balkan States as war rations, brought to the United States by a wounded Greek soldier, Gannes Krrtes (61091).

KOPTA, EMRY, Polacca, Ariz.: A tassel stick with cord, and a formed tassel, used by the Hopi Indians of Arizona (61157).

KOTERBA, FRANK, U. S. National Museum: White-crowned sparrow, *Zonotrichia leucophrys*, from Virginia (61131).

KRAUS, EDWARD H., University of Michigan, Ann Arbor, Mich.: 4 specimens of celestite-bearing rocks (60479, exchange).

KUEHLING, ROY H., Washington, D. C.: Insect, *Macromia taeniolata* (60207).

LANE, Mrs. ELIZABETH C. B., Washington, D. C.: Brick from the chimney of the house in which George Washington was born, in Westmoreland County, Va. (60999, loan).

LARKIN, Mrs. JOHN D., Buffalo, N. Y.: Bound volume entitled "Erwerbszweige, Fabrikwesen und Handel der Vereinigten Staaten von Nordamerika" (Industries, Manufactures and Commerce of the United States of North America), by C. L. Fleischmann, presented by the author to President Millard Fillmore in 1850 (61002).

LAYNE, J. C., jr. (See under Marrowbone Mining Co.)

LAYTON, Miss FLORENCE W., Washington, D. C.: 7 specimens of plants from Virginia (60143, 60341).

LEAR, Mrs. JOHN T., Perryman, Md.: Black vulture, *Catharista urubu*, from Maryland (60874).

LEAVY, JOSEPH B., U. S. National Museum: 24 United States postage stamps issued in 1915–1917 (61168).

LEE, WALLACE, Tulsa, Okla. (through Dr. E. O. Ulrich, U. S. Geological Survey): 9 specimens of calcareous algæ from the Permian of Kansas (60750).

LEHIGH UNIVERSITY, South Bethlehem, Pa. (through Prof. Benjamin L. Miller): Concretions from a coal mine at Jeddo, Pa. (60768, exchange).

LELAND STANFORD JUNIOR UNIVERSITY, Stanford University, Cal. (through Dr. J. O. Snyder): 10 fishes, consisting of type specimen of *Siphateles mohavensis*, 4 specimens of *Polistotrema stouti* and 5 of *Squalus sucklii* (60579).

LE MOULT, E., Paris, France: 4 butterflies, *Morpho marcus* (61070, exchange).

LENG, CHARLES, New York City: 4 beetles, *Syncalpyta* sp. (60722).

LENMAN, Miss ISOBEL H., Washington, D. C.: 48 specimens of iridescent antique glassware from the Orient (61233, loan).

LESHER, WHITMAN, & Co., INC., New York City: 2 samples of striped mohair cloth, "Silver Bloom," and 1 of alpaca dress fabric, "St. Nicholas Cloth" (60151).

LEWIS, Maj. GEORGE CHASE, U. S. Army: 2 mammals, a reptile and a batrachian, from the Philippine Islands (61239).

LEWTON, F. L., U. S. National Museum: 7 mounted photographs illustrating cultivation of the cocoanut palm (60269).

LICHTENAUER, J. MORTIMER, New York City (through Mr. Simon Wolf, Washington, D. C.): Oil portrait of Maj. Gen. Julius Stahel, U. S. Volunteers, by the donor (60853).

LILLY, ELI, & Co., Indianapolis, Ind.: 5 photographs showing stages in the manufacture of gelatin capsules (60657); 8 bottles of gelatin capsules of various colors and sizes (60817).

LIMBERG, CHARLES T., Leadville, Colo.: Braincase of a grizzly bear from Piceance Creek, Colo. (59966).

LINDLEY, NOLO M., Medford, Oreg.: Specimens of moss agate from near Medford (60879).

LINSLEY, R. W., Georgetown, Tex.: Lizard, *Gerrhonotus leiocephalus infernalis*, from Texas (60949).

LOCKWOOD, Mrs. BELVA ANN, COMMITTEE ON A TRIBUTE TO (through Mrs. Harvey W. Wiley, Washington, D. C.): Oil portrait of Mrs. Belva Ann Lockwood, by Nellie Mathes Horne (61187, loan).

LOEWENSTEIN, WEILLER & Co., New York City: 16 samples of silk and cotton and cotton dress goods (60432).

LÖFGREN, Dr. A., Jardin Botanico, Rio de Janeiro, Brazil: 4 living specimens of cacti, *Rhipsalis*, from Brazil (60402, exchange).

LONG, The Misses, Washington, D. C.: Wax doll of 1870, dressed in white, with wardrobe of 4 pieces (60046, loan); 74 mollusks (60142).

LONGLEY, Dr. W. H., Goucher College, Baltimore, Md.: 9 fish and 2 crustaceans, from Tortugas, Fla. (60935, 60966).

LONGUEUIL, COLLEGE DE, Longueuil, Canada: 500 specimens of plants from Quebec (60839, exchange).

LONGYEAR, Mrs. J. M., Brookline, Mass.: 4 oil paintings, "The Happy Mother," by Max Bohm, "A Breton Sunday," by Eugene Vail, "Evening," by William J. Kaula, and a landscape by Chauncey F. Ryder (60682, 60749).

LOOMIS, BURDETT, St. Marys, Ga.: 7 specimens of plants from Georgia (60306, 60505, 60596).

LOOMIS, Miss MARTHA L., Sherborn, Mass.: 285 specimens of plants from Massachusetts (60933, 60968).

LOTHROP, Mr. and Mrs. S. K., Cambridge, Mass.: Plaster cast of a carved wooden stool from Porto Rico (60744).

LUDLOW, Dr. CLARA SOUTHMAYD, Washington, D. C.: Pair of slippers worn by Ann Mary Hunt on the occasion of her marriage, November 20, 1850, to Dr. Jacob deR. Ludlow, a mourning fan used by the donor's mother, Mrs. Ann M. Hunt Ludlow, in 1862, and 2 cane baskets—additions to "The Sutphen-Schenck-Hunt Memorial Collection" (60045, 60384).

LUDLUM & CARLAND, New York City: 9 samples of wash silk fabrics—"Trousseau Crêpe" and "Crêpe Sans Gêne" (60369).

LUFF, J. N., New York City: 5 postage stamps of Chile, 1, 2, 4, 5 and 10 centavos, typographed in 1916 (60960).

LUNCEFORD, J. H., Delaplane, Va.: Flint arrowpoint found at Col. Mosby's headquarters, Delaplane (61194).

MCADOO, Hon. WILLIAM G., Secretary of the Treasury: 2 photographs showing the interior and exterior of an Araucanian hut (60054).

MCATEE, W. L., Bureau of Biological Survey, Washington, D. C.: 66 specimens of plants, chiefly from Maryland, New Jersey and Virginia (60469, 60628).

MCBURNEY, JOHN W., Washington, D. C.: 21¼-pound specimen of the New Concord, Ohio, meteorite (60435, deposit); hematite chisel or celt found near Cambridge, Ohio, about 1860, by Dr. John McBurney; and a grooved stone ax from Ohio (60429).

MCCAGG, Mrs. THERESE DAVIS, Washington, D. C.: 2 oil paintings (mountain scenes), by F. E. Church and I. Diday (61241, loan).

MCCURRACH, JAMES, & BRO., New York City: 14 samples of Scotch plaid tie silks and 54 of silks showing the plaids of different Scottish clans (60909).

MACDONALD, ALFRED ERNEST, Bloomsburg, Pa.: Oil painting by Alfred Ernest Macdonald, entitled "Canberra, 1913" (60248, loan).

MACDONALD, Dr. D. F., Bureau of Mines, Washington, D. C. (through Dr. T. Wayland Vaughan): 10 lots of invertebrate fossils from Costa Rica (60679).

MCGREGOR, E. A., El Centro, Cal.: 24 specimens of plants from South Carolina (60833).

MCGUIRE, JAMES C., New York City: Chair made by Benjamin Franklin and presented by him to Thomas Jefferson, who gave it to James Madison (60337); mahogany screen and the base of a nargile owned by George Washington, and a mahogany chair owned by James Madison (60701). Loan.

MCGUIRE, Miss MARY M., Washington, D. C.: 39 miscellaneous archeological specimens (60338); mahogany worktable owned by Dolly Madison (60702, loan).

MACKENZIE, KENNETH K., East Orange, N. J.: 8 specimens of plants, *Antennaria*, from New Jersey (60675, exchange).

MACKIE, D. B., Malden, Mass.: A bundle of palmwood splinters, *Suga*, used for setting in the ground, especially in rivers at the fords, to pierce the feet of enemies (Kalingas, Mountain Province, Luzon, P. I.) (60427).

MCLACHLAN, R. W., Montreal, Canada: Bronze Jeanne d'Arc souvenir medalet and 2 Canadian 1-cent pieces issued in 1916 (60353).

MACOMB, Misses CHRISTINA and NANNIE R., Washington, D. C.: 2 boys' Turkish costumes brought to the United States by Commodore John Rodgers, U. S. Navy, for his sons, during the early part of the 19th century (60367).

MAINE AGRICULTURAL EXPERIMENT STATION, Orono, Me.: 3 mollusks, *Agriolimax agrestis*, collected by Dr. Edith M. Patch at Orono (61115).

MAINE FELDSPAR CO., Auburn, Me.: Minerals from the quarries of the Maine Feldspar Co. (60420).

MALNATI, A., & Co., Quincy Adams, Mass.: 4-inch cube of "golden pink" granite (60585).

MANCHESTER, JAMES G., New York City: 2 specimens of quartz pseudomorphs after glauberite (60254); specimen of pectolite showing incipient alteration to stevensite, and one showing stevensite of three types, pink, white and black (61203).

MARQUEZ, Gen. CUERVO, Bogota, Colombia: Skull from an ancient tomb of the Chibcha, found in the Cerro del

MARQUEZ, Gen. CUERVO—Continued. Tablazo, near the village of Subachoque, northwest of Bogota (60743); 2 Indian skulls and an odd jaw from the valley of the Sumapaz River, Colombia (61152).

MARROWBONE MINING Co., Cincinnati, Ohio (through Mr. J. C. Layne, jr.): Fossil tree stump from a coal mine at Lookout, Pike County, Ky. (60567).

MARSHALL, ERNEST B., Laurel, Md.: Shrew, *Sorex*, and 4 squirrels, from Maryland (60443, 60455).

MARSHALL, GEORGE, U. S. National Museum: 2 field mice, *Peromyscus*, and a deer, *Odocoileus*, from North Carolina (60804); star-nosed mole, *Condylura* (61209).

MATHEWS, Miss ARABELLA W. (through Miss Mary C. Mathews, Washington, D. C.): Embroidered linen handkerchief owned during the Civil War by Mrs. Mary A. Safford Mathews of Vermont (61054, loan).

MATSON, GEORGE C., U. S. Geological Survey, Washington, D. C. (through Dr. T. Wayland Vaughan): 125 fossil mollusks from between El Carmen and Lambrano, Colombia (60751); 20 lots of fossils from Colombia (60770).

MATTOX, J. W., Muskogee, Okla.: Mounted loon, *Gavia immer* (60154).

MAXON, WILLIAM R., U. S. National Museum: 30 specimens of plants from Maryland and Virginia (59995); 16 specimens of ferns, *Dryopteris*, from the United States (60556).

MAXWELL, Miss FRANCINA M. (See under Eastman, Mrs. Annie H.)

MAXWELL, Capt. W. J. (See under Eastman, Mrs. Annie H.)

MAYERS, Miss C., Washington, D. C. (through Mr. L. M. Brazier, Greenville, Pa.): Doll of the latter part of the 19th century (60316).

MAYNARD, Capt. CHARLES W., Detroit, Mich.: "Housewife" carried by a United States soldier during the Civil War (60666, loan).

MEARNS, Mrs. ELLA W., Circleville, Ohio: Honorable discharge from the American Army of David Niles, sergeant, 8th Massachusetts Regiment, dated June 13, 1783, signed by George Washington, Commander in Chief (60787, loan); dental outfit, consisting of a leather-covered case containing instruments and drugs, carried by Lieut. Col. Edgar A. Mearns, surgeon, U. S. Army, during the Smithsonian African Expedition, 1909–1910 (61096).

MERGENTHALER LINOTYPE Co., New York City: 3 typesetting machines (60548, loan).

MERRYWEATHER, J. G., Washington, D. C.: Pyrite crystals from Locust Mt., Shenandoah, Pa. (60514).

MEYER, FRANK N., U. S. Department of Agriculture, Washington, D. C.: 38 land mollusks from China (60083).

MICHIGAN, UNIVERSITY OF, MUSEUM OF ZOOLOGY, Ann Arbor, Mich.: 3 salamanders from Washington (60482, 60578); 149 bird skins from the Santa Marta region, Colombia (61260, exchange).

MILLER, E., Silver City, N. Mex.: A tailed whip scorpion and a beetle, *Eleodes* (60091).

MILLER, GERRIT S., jr., U. S. National Museum: Migrant shrike, *Lanius ludovicianus migrans*, from Virginia (60636); rat, *Rattus alexandrinus*, from Luray, Va. (61189); 4 rabbits, *Sylvilagus*, from Virginia (61210, 61237).

MILLER, Mr. and Mrs. ROBERT I., Washington, D. C.: Mounted domestic dog, "Silver Sky" (61142).

MILLHOUSER, S., Washington, D. C.: United States silver quarter dollar issued in 1805 (60385).

MILLNER, I. B., U. S. Geological Survey, Washington, D. C.: Photograph of the gun-deck of the U. S. S. *Hartford*, enlarged from a picture taken after the battle of Mobile Bay, August, 1864 (60597). (See under Farragut, Loyall, Estate of.)

MINER, Mrs. L. D., Washington, D. C.: Specimen of a plant, *Pleuropterus zuccarinii*, from Maryland (60238).

MINNESOTA, UNIVERSITY OF, Minneapolis, Minn.: 42-gram specimen of the Tourinnes-la-Grosse, Belgium, meteoric stone (60774, exchange); 66 specimens of plants from Guatemala (60997).

MINOR, MEREDITH R., Richmond, Va.: 5 earthworms, *Limnodrilus* species, taken from a hydrant in Richmond (61303).

MIRGUET, C. E., U. S. National Museum: Skeleton of a mole, *Scalopus aquaticus*, from Washington, D. C. (60262).

MISSOURI BOTANICAL GARDEN, St. Louis, Mo.: 3,165 specimens of plants, mainly from the United States (60218, 60580); 2 photographs of a cactus, *Cereus polylophus* (60926). Exchange.

MONROE, GUSTAVUS LANE, Vicksburg, Miss.: Poncho worn by Maj. Gen. Zachary Taylor, U. S. Army, during his campaign in Mexico, 1846–1847 (61198, loan).

MONTANÉ, Dr. LOUIS, Museo Montané, Universidad de la Habana, Havana, Cuba: 26 bats from Cuba (60034); 5 mandibles of the rodent *Capromys pilorides* (61150).

MONTEROSATO, Marchese DI, Palermo, Italy: About 1,045 mollusks from the Mediterranean (60754).

MOORE, CLARENCE B., Philadelphia, Pa.: Plaster cast of a monolithic ceremonial hatchet from Moundsville, Ala. (60078); large earthenware bowl with incised spiral decoration, found by the donor on an aboriginal site at Hogtown Bayou, Choctawhatchee Bay, Florida coast (61232).

MORAN, THOMAS, Santa Barbara, Cal.: 2 oil paintings, "Grand Canyon of the Yellowstone" and "A Rocky Mountain Solitude," by Thomas Moran (60911, loan).

MORRIS, Mrs. JOHN SPEED, Washington, D. C.: Bible owned by Martha Jefferson Randolph, daughter of Thomas Jefferson and wife of Thomas Mann Randolph (61159, loan).

MORSE, DONALD, Washington, D. C.: Slug, *Limax maximus*, from the District of Columbia (60177).

MORSE, EDWARD L., Stockbridge, Mass.: 2 bronze medals presented to Samuel F. B. Morse by the French Government in 1867 (61120).

MOSIER, C. A., Royal Palm State Park, Fla.: 5 mollusks, *Liguus fasciatus*, from Royal Palm State Park (60263).

MOXLEY, GEORGE L., Los Angeles, Cal.: Specimen of fern from California (60530); 39 specimens of ferns from Mexico (61037, 61082).

MOYER, LYCURGUS R., Montevideo, Minn.: 17 specimens of plants (61016).

MUSEU ROCHA, Ceará, Brazil (through Señor Dias da Rocha): 12 specimens, 10 species, of marine and fresh-water mollusks from Brazil (59971).

MUSEUM OF COMPARATIVE ZOÖLOGY. (See under Harvard University.)

MUSEUM OF THE AMERICAN INDIAN, HEYE FOUNDATION, New York City: Bones of a canid and rodent from Cuba (60490); fossils from the Ulua River valley, Honduras (61011).

MYERS, FRANK J., Bethlehem, Pa.: 6 species (9 microscopic slides) of Rotatoria from Los Angeles and vicinity, including the type of a new species (60022).

NADAY & FLEISCHER, New York City: 2 samples of silk novelty dress goods, "Givrette" (60043).

NASH, V. K., Portersville, Cal.: Scraper of jasper (59980).

NATHO, H., Philadelphia, Pa.: 2 living specimens of plants, *Diascia* (60081).

NATIONAL ACADEMY OF SCIENCES, Washington, D. C. (through Dr. Charles D. Walcott, president): Gold medal of the Institute of France, 1869, bronze medal of the International Exhibition, Philadelphia, 1876, and Decoration of the Order of the Mejidieh, awarded to James Craig Watson in recognition of his services to science, and a copy of the Ann Arbor Register of November 24, 1880, giving an account of the life and death of James Craig Watson (61170, loan).

NATIONAL LEAD CO., New York City: Model of a manufacturing plant, showing the various operations in

NATIONAL LEAD CO.—Continued.
connection with the preparation of white lead (61271).

NATIONAL SOCIETY OF THE COLONIAL DAMES OF AMERICA, Washington, D. C.: Flintlock musket owned by Daniel Boone, 2 British officers' swords of the period of the Revolution, and a bullet mold and an Indian stone ax of the Colonial period (61274, loan).

NAVY DEPARTMENT:

Bureau of Yards and Docks: 2 pieces of wood containing specimens of a mollusk, *Martesia xylophaga*, taken from a barge at Pearl Harbor, Honolulu (60867).

NEBRASKA, UNIVERSITY OF, Lincoln, Nebr.: Paratypes of 11 species of wasps (60709).

NEIGHBORHOOD HOUSE, Washington, D. C. (through Mr. J. P. S. Neligh): Dyed silk robe ornamented by tied and dyed work, designed and executed by Mr. Neligh (60860, loan).

NELIGH, J. P. S., Washington, D. C.: Dyed silk scarf ornamented by tied and dyed work, designed and executed by the donor (60887).

NELSON, ENRIQUE M. (See under Argentina, Comision de la Exposicion Universal, 1915, San Francisco, Cal.)

NEWMAN, A. D., Harrisonville, Mo.: 11 fresh-water amphipods (60889).

NEW YORK ASSOCIATION FOR THE BLIND, THE, New York City: 11 representative samples of weaving and basketry, made by the blind workers trained at "Lighthouse" No. 1, conducted by the Association in New York City (60625).

NEW YORK BOTANICAL GARDEN, Bronx Park, New York City: 2,804 specimens of plants from the West Indies (59970, 60409, 60518, 60562); 20 specimens of cacti (60159, 61244); 31 specimens of fungi from Florida (60299); 180 specimens of mosses, chiefly from Florida and the West Indies (60736, 60978); 10 photographs and 16 specimens of plants (60871, 60932); 79 specimens of

NEW YORK BOTANICAL GARDEN—Contd.
plants, Scrophulariaceae, from the western United States (60892). Exchange.

NEW YORK STATE MUSEUM, Albany, N. Y. (through Mr. H. P. Whitlock, State mineralogist): 3 specimens of calcite from Sterlingbush, N. Y. (60868, exchange).

NEW YORK ZOOLOGICAL SOCIETY, New York City (through the New York Aquarium, Dr. C. H. Townsend, director): 2 living specimens of plants, *Melocactus*, from the Bahamas (60144).

NININGER, Prof. H. H., Bordsburg College, Lordsburg, Cal.: Bee, *Anthrophora stanfordiana* (60023).

NORTHERN HEMLOCK & HARDWOOD MANUFACTURERS ASSOCIATION, Oshkosh, Wis., and THE BRIDGEPORT WOOD FINISHING CO., New Milford, Conn.: Specimens of 5 species of hardwoods showing 19 types of wood finishes (61254).

NORTON, Miss GERTRUDE M., administratrix of estate of William E. Norton, New York City: 2 oil paintings by William E. Norton, "Night Attack on the General Armstrong off Pico, Azores" and "Mussel Gatherers" (60812, loan).

NORTON, J. B., Bureau of Plant Industry, Washington, D. C.: 45 specimens of plants, mainly from South Carolina (60509, 60689); specimen of birch, *Betula lenta*, from the vicinity of Washington (60864).

NORTON, Prof. J. B. S., College Park, Md.: 6 specimens of plants from Maryland (60759).

NUTTALL, Mrs. ZELIA, Cambridge, England: Terra-cotta head found at Italica, Spain (61207, loan).

NUTTING, Prof. C. C., State University of Iowa, Iowa City, Iowa: 41 microscopic slides, representing a study series of 41 species of hydroids of the family Campanulariidae (60663).

O'FALLON, JOHN J., jr., St. Louis, Mo.: 12 Middle Cambrian trilobites from British Columbia (60527).

OHIO STATE UNIVERSITY, Columbus, Ohio (through Prof. Robert F. Griggs): 24 specimens of plants from Alaska (60816).

OLDROYD, T. S., Stanford University, Cal.: About 500 fossil crab claws (59977).

OLDROYD, Mrs. T. S., Stanford University, Cal.: 45 marine shells from Pacific Grove, Monterey Bay, Cal. (60515).

ORANGE CAMERA CLUB, Orange, N. J. (through Mr. J. W. Grant): A plate developing tank (60700).

ORCUTT, CHARLES R., San Diego, Cal.: About 337 miscellaneous fossils, chiefly from San Diego and Lower California (Tertiary) and Texas (Cretaceous) (60916); a parrot, 12 crustaceans and 58 specimens (3 species) of land shells from California (61171).

OREGON AGRICULTURAL COLLEGE, Corvallis, Oreg.: 96 specimens of plants from Oreogon (60039, 60387, 60517, 60525); 189 specimens of plants, mainly from Oregon (60726, 60792, 60832, exchange).

OVENSHINE, S., Washington, D. C.: 26 ethnological specimens of the North American Indians (59975).

OWEN, N. J., Sherman, N. Mex.: Sample of lead-bismuth sulphide from Bromide Mining District, Sierra County, N. Mex. (60619).

PALMER, G. H., Rosslyn, Va.: Brown king snake from Virginia (60024); 2 young snakes from Ballston, Va. (60300).

PANAMA-CALIFORNIA EXPOSITION, 1915, San Diego, Cal.: 1,280 anthropological specimens including archeological and other material mainly from South America, southeast Africa, and Siberia, and a series of busts and casts of North American Indians, South Africans and other racial groups (61302).

PANAMA-PACIFIC INTERNATIONAL EXPOSITION, 1915, San Francisco, Cal. (through Mr. O. H. Fernbach, secretary of the International Award System): Bronze medal of award and a diploma conferring a gold medal, awarded to the department of biology of the U. S. National Museum by the International Jury of Awards of the Exposition (60507).

PANAMA-PACIFIC INTERNATIONAL EXPOSITION, 1915—Continued.

PARIS, Mrs. MARGARET, Carácas, Venezuela: Snakes and insects collected by the late Mr. Musée at Carácas (60575).

PARISH, S. B., San Bernardino, Cal.: 4 living specimens of *Cactus* from California (60401); specimen of plant, *Isoetes* (61122).

PARKER, W. H., Salt Lake City, Utah (through Mr. Victor C. Heikes): 3 specimens of zinc and a manganese mineral from Utah (60283.)

PARKINS, NATHAN, Fort Defiance, Va.: mineral from Utah (60283).

PARKS, E. M., Ten Sleep, Wyo. (through Dr. T. W. Stanton, U. S. Geological Survey): A collection of Tertiary fishes, plants and mollusks, from northeastern Nevada (60876).

PARTELLO, Col. J. M. T., U. S. Army, Inglewood, Cal.: A moth (61223).

PATERSON, A. W., Spokane, Wash.: Samples of zinc ore (60626).

PATTEN, Miss MARY E., Washington, D. C.: 2 sample outfits prepared by the Lafayette Committee on the United States for French soldiers in the field (60550).

PATTERSON, ANDREW JOHNSON, Greeneville, Tenn.: Burnoose opera cloak worn at the White House by Mrs. Martha Johnson Patterson, during the administration of her father, President Andrew Johnson, 1865–1869 (60844, loan).

PAUL, JOHN R., Baltimore, Md.: Sturgeon, *Acipenser sturio* (60644).

PAULSON, Miss FANNIE E., Missoula, Mont.: 127 specimens of plants from Montana (61107).

PAVATEA, TOM, Polacca, Ariz.: 1 somipiki (cornmeal pudding wrapped in corn husk bundles and tied together, a gift to the Hopi Indian children at ceremonies) (60315).

PEABODY MUSEUM OF NATURAL HISTORY. (See under Yale University.)

PEARL PRODUCTS CO., THE, Benton Harbor, Mich.: 5 fresh-water mollusks, *Pleurocera subulare* and *Campeloma milesii*, collected in Paw Paw River, about a mile from Benton Harbor (60287, 60346).

PEMBROKE, E. R., Salt Lake City, Utah (through Mr. Victor C. Heikes): 3 specimens of zinc ore from Yellow Pine District, Nev. (60285).

PERCY, Mrs. GEORGE R., Bronxville, N. Y.: Bronze figure, "The Fire Dance," by Louis Potter, son of the donor (60919).

PERELMA, OSSIP, Washington, D. C.: 47 paintings by Ossip Perelma (61127, loan for special exhibition).

PERGANDE, Miss LAURA, Quincy, Ill.: The Theodore Pergande collection of insects, including his exceedingly valuable collection of ants (60215).

PERSHING, Gen. JOHN J., U. S. Army: 562 archeological specimens from mound sites in San Joaquin Canyon, Santa Maria Valley, Chihuahua, Mexico, collected by Capt. John W. Wright, 17th Infantry, U. S. Army, and Capt. Alexander T. Cooper, Medical Corps, U. S. Army, and 35 photographic films taken by the collectors while in the field (61166).

PERUVIAN EXPEDITION OF 1914–15 (under the auspices of Yale University and the National Geographic Society): Land shell and a butterfly, collected by Mr. E. Heller in Peru (60153).

PETER, WALTER G., Washington, D. C.: 3 letters from Gen. Washington to Thomas Peter, dated, respectively, June 14, 1797, May 18, 1798, and December 3, 1799, and a letter from Thomas Peter to Gen. Washington, dated January 28, 1799 (60048, loan).

PETERS, C. O., Ironhill, Md.: Specimen of quartz from Sugar Loaf Mountain, Md. (60308).

PETT, IMER, Salt Lake City, Utah (through Mr. Victor C. Heikes): Specimen of crystallized anglesite from Eagle and Blue Bell Mine, Eureka, Utah (61068).

PEYTON, Miss ANN LEE, The Plains, Va.: 8 pieces of Chinese porcelain (61069, loan).

PEYTON, JACK, Los Angeles, Cal.: Wingless katydid, *Stenopalmatus* (60334).

PHILIPPINE ISLANDS, GOVERNMENT OF THE, Manila, P. I.:

Bureau of Science: 5 packages of Philippine lichens (60246, deposit); 450 Australian plants, and specimens of a scale insect from Borneo (60529, exchange); 1,046 specimens of plants from the Philippine Islands (60762, exchange).

PHILLIPS, DUNCAN, Washington, D. C.: Oil portrait of Ellwood Hendrick, chemist, by Augustus Vincent Tack (61073).

PHILLIPS, Miss E. C., New York City: English Bible, illustrated with maps and plates, printed by Berriman, Philadelphia, 1796 (61012).

PHILLIPS, WALTER P., Columbus, Ohio: 8 disk graphophone records—lessons in Morse telegraphy (61188).

PILATE, G. R., Loma Linda, Cal.: About 1,000 insects from Tuolumne Meadows, Cal. (60719).

PINCKNEY, Mrs. G. M., Washington, D. C.: 6 chairs owned by Charles Cotesworth Pinckney (1746–1825) (61078, loan).

PIONEERS OF ALASKA (through Mr. Charles W. Thornton, Grand secretary-treasurer, Nome, Alaska): 92 specimens of plants from Alaska (60566).

PIPER, Prof. C. V., Bureau of Plant Industry, Washington, D. C.: Specimen of a moss, *Buxbaumia piperi*, from Idaho (60592). (See under Gorman, M. W.)

PITTIER, Prof. H., Bureau of Plant Industry, Washington, D. C.: Specimen of the wood of "Gabilan," *Engelhardtia oreamunoa*, collected by Señor Ad. Tonduz in Costa Rica (60493); fragments of the types of 4 species of plants, *Osteomeles* (60865).

POMEROY, Lieut. A. W. JOBBINS-, Washington, D. C.: Sample of kaolin and 2 muscoid Diptera, from Cameroons, West Africa (60349, 60614).

POMONA COLLEGE, Claremont, Cal.: 266 specimens of plants from California (60595, exchange); 160 specimens of plants from Nicaragua and Cuba (60791, 61116); 86 marine invertebrates from Laguna Beach, Cal. (61149).

PORTER, Miss ELIZABETH, Hampton, Va.: Shrimp, *Upogebia affinis*, collected at Hampton (60894).

PORTER, Mrs. JOHN BIDDLE, Washington, D. C.: Plaster bust of Brig. Gen. Andrew Porter, U. S. Volunteers, terra cotta bust of Lieut. Col. John Biddle Porter, U. S. Army, in uniform of First Troop, Philadelphia City Cavalry, and plaster bust of Nicholas Biddle, financier (60133, loan).

PORTLAND CEMENT ASSOCIATION, Chicago, Ill.: 2 photographs of concrete roads (61101).

POST OFFICE DEPARTMENT: 10 sets of specimen stamps, etc., in triplicate (1,752 specimens), received from the International Bureau of the Universal Postal Union, Berne, Switzerland (60020, 60156, 60472, 60520, 60767, 60861, 60863, 61039, 61105, 61268); 2 sets (119 specimens) of specimen stamps, etc., in triplicate (excepting those from Liberia which include 1 specimen each), received from the International Bureau of the Universal Postal Union (60145, 60302); 22 postage stamps received from the International Bureau of the Universal Postal Union (60698); 3 specimens each (51 specimens) of the current United States postage stamps on unwatermarked paper, and 12 United States 2-cent stamped envelopes of the design of 1915 (60843); 22 United States postage stamps of the current series, in triplicate, and 2 sheets, in triplicate, of 100 stamps each, showing a 5-cent stamp and 2 5-cent stamps, respectively, printed in red (61156); 2 sheets of current United States 2-cent postage stamps of 100 stamps each, in triplicate, perforated 10, showing a 5-cent stamp and 2 5-cent stamps, respectively, printed in red (61264); Spanish flag taken from the post office at Manila, P. I., when F. W. Vaille, assistant superintendent, Railway Mail Service, took possession of the office on behalf of the United States, in August, 1898 (60584); manuscript journal kept by Hugh Finlay, surveyor of the post roads on the continent of North America, during his surveys of the post offices between Falmouth, Mass., and Savannah, Ga., September 13, 1773, to June 26, 1774 (60637, deposit).

PRETZ, HAROLD W., Allentown, Pa.: 48 specimens of plants, *Antennaria*, from Pennsylvania (60674, exchange).

PRICE, Miss SYDNEY, Baltimore, Md.: Blue satin brocade dress of the Colonial period, a white hand-embroidered skirt of the early part of the 19th century, and a pair of white satin slippers (61261, loan).

PRIMOS CHEMICAL CO., Boulder, Colo.: Samples of molybdenite from the Primos mines, Clear Creek County, Colo. (61259).

QUINTER, G. E., Washington, D. C.: Upper pharyngeal bone of a salt-water drumfish, *Pogonias chromis*, collected at Asbury Park, N. J. (61172).

RAINEY, H. W., Rowland, N. C.: Rhinoceros beetle, *Dynastes tityus* (60216); American stag-beetle, *Lucanus elaphus* (60511).

RANSON, ROBERT, Pablo Beach, Fla.: 3 specimens of peat (60130).

RATIGAN, W. J., New Orleans, La.: Fragments of a human skull, found in a shell bank in Louisiana (60352).

READING, R. W., Washington, D. C.: A hunting bow, war bow, and a quiver filled with poisoned arrows, from Gold Coast, West Africa (61135, loan).

REAMER, LOUIS, Short Hills, N. J.: 8 minerals (60371); specimen of pectolite (60918); 4 minerals from West Summit, N. J. (61028). Exchange.

RESSER, CHARLES E., U. S. National Museum: 20 specimens of iron ores, 50 Lower Cambrian fossils, and a specimen of quartz, from near Lancaster, Pa. (60265).

REYNOLDS, L. R. (See under Blaisdell, F. E.)

REYNOLDS, Mr. and Mrs. L. R., San Francisco, Cal.: Male and female types of dragon flies, *Agrion asquabile californicum* (60097).

REYNOLDS, ROBERT R., Ceiba, Honduras (through Mr. Francis J. Dyer): Bark blanket of the Mosquito Indians of Honduras (60458).

RICE, A. P., Dorchester, Mass.: Fragment of pottery and an obsidian arrowhead, from Yucatan, Mexico (59999); Maya stone idol from Yucatan (60000, loan); 5 boxes of insects (60070, 60240); opossum, pocket gopher and a weasel, from southern Mexico (60136).

RICE, GEORGE S. (See under Harrington, Daniel.)

RICHARDS, EDGAR, Washington, D. C.: Photographic panorama of the city of Rome, Italy (60094).

RICHARDSON, Mrs. CHARLES W., Washington, D. C. (through Mrs. R. G. Hoes): 2 leghorn hats of the early part of the 19th century (60120); 93 miscellaneous articles, mainly wearing apparel, of the 19th century (60268, 60473). Loan.

RIDGWAY, ROBERT, U. S. National Museum: 32 bird skins from Illinois (60090, 61161); skin and skull of a woodchuck (60965).

RILEY, J. H., U. S. National Museum: 46 bird skins from Argentina (60089); 7 bird skins from the United States (60985); 10 bird skins from Argentina (61201, exchange).

RINDSFOOS, WILLIAM, Circleville, Ohio: Skulls and scalps of 4 mountain sheep, a grizzly bear skull, 3 caribou skulls and 2 scalps, skin and skull of a fox, skull and scalp of a moose, and skull of a mountain goat (60756).

RITTER, H. W., Tippecanoe City, Ohio: Female specimen of a fish, *Mollienisia* sp., collected at Fort Myers, Fla. (59986).

RIVES, Miss ISABEL, Washington, D. C.: 2 bonnets of the period of the Civil War (60069, loan); 6 dolls, 6 bonnets, 2 bandboxes, 3 pieces of jewelry, 5 miscellaneous relics, an iron lantern with glass sides, a dress and pair of shoes worn by Mary Ann Eliot Rives, wife of John Cook Rives, founder of the "Congressional Globe," and a pair of shoes worn by Belle Maury Rives, wife of Bvt. Lieut. Col. Wright Rives, U. S. Army (60470, 60498, 61098).

RIXON, Mr. and Mrs. THEODOR F., Clallam Bay, Wash. (through Dr. Leo J. Frachtenberg, Bureau of American Ethnology): Carved house post, Quileute Indian, Beaver Prairie, Clallam County, Wash. (60981).

ROBERTS, T. R., Juliaetta, Idaho: Sample of rutile with associated minerals, from Latah County, Idaho (59967).

ROBERTS, VERNON A., Washington, D. C.: About 150 insects from the vicinity of Washington and 75 from Ocean View, Va. (60108).

ROBERTSON, WILLIAM. (See under Shepard, Charles U.)

ROBINSON, Col. WIRT, U. S. Army, West Point, N. Y.: About 650 insects from Baguio, Luzon, P. I. (61062); insects from Costa Rica (60205).

ROCKLAND SILK CO., INC., New York City: 6 samples of novelty silk dress goods (60931).

ROEBLING, Col. WASHINGTON A., Trenton, N. J.: Specimen of manganosite from Franklin Furnace, N. J. (60866, exchange); 14 minerals from Paterson, N. J. (60939); specimen of glendonite from Australia (61219).

RONCERAY, Miss MARIE ESTELLE DE, Washington, D. C.: 8 pieces of cotton patchwork quilts made between 1815 and 1820 by Miss May Martin, later Mrs. Henry John Crosson, grandmother of the donor (60576).

ROSE, Dr. J. N., U. S. National Museum: 5 specimens of fungi from the District of Columbia (60330).

ROSEN, HARRY R., Purdue University, Lafayette, Ind.: 176 specimens of plants from the District of Columbia and vicinity (60037, 60311, 61167); 144 specimens of fungi from Maryland (60331, 60340).

ROSENBUSCH, Miss LOUISE A., U. S. National Museum: United States gold dollar issued in 1855 (60447).

ROULAND, ORLANDO, New York City: 27 oil paintings, consisting of portraits, figures and landscapes, by Orlando Rouland (61004, loan for special exhibition); portrait in oil of J. J. Shannon, R. A., by the donor (61075).

ROWLETT, Mrs. S. C., Crawford, W. Va.: Specimen of a plant, *Cassia*, from West Virginia (60380).

ROYAL BOTANIC GARDEN. (See under Edinburgh, Scotland.)

ROYAL ONTARIO MUSEUM OF MINERALOGY, Toronto, Canada: 6 minerals from the Hudson Bay Mine, Salmo, British Columbia (60746, exchange).

RUBY, D. A., Boulevard, Cal. (through Dr. J. C. Thompson, U. S. Navy): 3 reptiles from California (60067).

RUSSELL, Mrs. CHARLES W., Baltimore, Md.: Lady's bonnet of the latter part of the 18th century (60905).

RUSSELL, Maj. FREDERICK F., U. S. Army, Ancon, Canal Zone: Isopod, *Cymothoa oestrum*, parasitic in the mouth of a fish (60357).

RUSSELL, Rev. J. TOWNSEND (through Dr. Mitchell Carroll, Washington, D. C.): Rare Hawaiian tapa, in 5 sheets (61208, loan).

RUST, HENRY J., Coeur d'Alene, Idaho: 403 specimens of plants from Idaho (60672).

RUTH, Prof. ALBERT, Polytechnic, Tex.: 138 specimens of plants from Texas (60412, 60491).

RUTH, JOHN A., Clifton, N. J.: 16 specimens of plants from New Jersey (60627).

SAFFORD, W. E., Bureau of Plant Industry, Washington, D. C.: 14 specimens of ferns from Peru (60397).

SAN DIEGO SOCIETY OF NATURAL HISTORY, San Diego, Cal. (through Mrs. R. Stephens): 9 crustaceans and 3 echinoderms, from California (59982).

SANGER, WILLIAM, Nashville, Ark.: Various fragmentary bones of a plesiosaurian reptile, found in Howard County, Ark. (60882).

SANGIOVANNI, VINCENTE, Samana, Santo Domingo, West Indies (through Dr. William L. Abbott): Polished stone celt found at Cape Samana, Santo Domingo (60451).

SARGENT, Mrs. W. D., Somerset, Pa.: 4 old hand-woven coverlets (60464, loan).

SAUNDERS, M. B., South Norwalk, Conn.: About 50 mollusks, *Gemma purpurea*, collected in South Norwalk (60971).

SAVAGE, Dr. THOMAS R., New York City: 10 worms, *Nereis limbata*, from Hempstead Bay (60271).

SCHERNIKOW, ERNEST, New York City (through Mr. D. S. Martin, Charleston, S. C.): Specimen of spherosiderite and hyalite in basalt, from Spokane, Wash. (60873).

SCHMID, EDWARD S., Washington, D. C.: Double yellow-headed parrot, *Amazona oratrix*, macaw, *Ara chloroptera*, barred owl, *Strix varia*, and an English sparrow, *Passer domesticus* (60815, 60820, 60904).

SEIP, Dr. M. S., Easton, Pa.: Photograph showing portraits of the following signers of the Declaration of Independence—Thomas Stone, Thomas Jefferson, John Penn, Carter Braxton, John Morton, William Williams, Thomas Heyward, jr., and George Wythe (60852).

SHANNON, R. C., Bureau of Entomology, Washington, D. C.: 3 snakes from Maryland (60002, 60025).

SHAW, H. L., Glen Rock, Pa.: Wooden rope machine, used by the grandfather of the donor for twisting bed cords and wash lines (60944).

SHEPARD, Dr. CHARLES U., late of Summerville, S. C. (through Mr. William Robertson and Mr. Philip E. Chazal, executors of and trustees under his will): The "Shepard" collection of

SHEPARD, Dr. CHARLES U.—Continued. meteorites, together with the correspondence and books of his father, Prof. Charles U. Shepard, pertaining to meteorites (60250, bequest); a collection of minerals, including unset gems, aggregating 5,050 specimens, and a bound catalogue of the collection (60251, deposit).

SHEPHERD, E. S., Geophysical Laboratory, Washington, D. C.: Snake from San Bernardino County, Cal. (61155).

SHOEMAKER, CLARENCE R., U. S. National Museum: 2 isopods, 25 amphipods, 4 shrimps, 20 mollusks, 25 insects and 3 fishes, collected at Grove Beach, Conn. (60160). (See under Doolittle, A. A.)

SHOEMAKER, ERNEST, Brooklyn, N. Y.: Beetles, *Helluomorpha nigripennis*, from Glencarlyn, Va. (60225); 27 beetles, including *Ammodonus fossor*, *Elater xanthomus* and *Hypomolyx pineti* (60714, exchange).

SHOEMAKER, M., Washington, D. C.: 2 teeth of a fossil cetacean, from Miocene deposits at Chesapeake Beach, Md. (60878).

SHUFELDT, Dr. R. W., U. S. Army (retired), Washington, D. C.: Bot fly, *Cuterebra cuniculi*, from Great Falls, Md. (60100).

SIMON, R. & H., Co., Union Hill, N. J.: 2 samples of novelty shot silks—"Armure Rousseau" and "Satin Elizabeth" (60249).

SJOBLOM, ERNEST, Ekalaka, Mont.: Wolf skull (60838).

SKEELS, H. C., U. S. Department of Agriculture, Washington, D. C.: 7 specimens of orchids from the District of Columbia and vicinity (61052).

SLATER, Mrs. H. D., El Paso, Tex.: 4 specimens of plants from New Mexico (60255, 60814).

SLATER, W. A., Washington, D. C.: Oil painting, "The Mill," by Meindert Hobbema (60496, loan).

SMILLIE, Miss LYDIA, Washington, D. C.: Photograph of John J. Audubon, from a daguerreotype made in 1846 (61182).

SMITH, C. W., Oroville, Wash. (through U. S. Geological Survey): 3 specimens of native arsenic, from 18 miles northwest of Loomis, Wash. (60753).

SMITH, IRVING G., Papeete, Tahiti, Society Islands: Photograph of cocoanut palms (60516).

SMITH, Dr. J. HOLMES, University of Maryland, Baltimore, Md.: 70 anatomical specimens (61008, 61077, 61175).

SMITH, Miss LUCY NEVILLE, Rockville, Md.: Decimal watch made by Berthoud Freres, Paris, 1800 (60902, loan).

SMITH, R. M., Clemson College, S. C.: 3 beetles (60222).

SMITH, Dr. WILBUR C., Tulane University, New Orleans, La.: 29 fishes collected by Mr. Edward H. Taylor at Manila, P. I. (61177).

SMITHSONIAN INSTITUTION:

Collection of ethnological objects gathered in British Guiana by Dr. Walter E. Roth (60053); bronze medal of award and a diploma conferring a gold medal, awarded to the Langley Aerodynamical Laboratory of the Institution by the International Jury of Awards of the Panama-Pacific International Exposition, San Francisco, 1915 (60119); spinning wheel, yarn reel, loom shuttle and a pair of hand cards for wool—a legacy to the Institution from Miss Martha James Lawrence Benson, of Allenton, Ala. (60138); dress, feather, and a pair of shoes, worn at the court of Edward VII in 1910 by Cornelia Cole Fairbanks, wife of Charles Warren Fairbanks, and lent to the Institution by Mrs. John W. Timmons (Adelaide Fairbanks Timmons) (60309); diploma conferring a grand prize, awarded to the Institution for a collective exhibit, by the Jury of Awards of the Panama-California Exposition, San Diego, 1915 (60783); ivory statuette, Italian, of the 13th century, collected in Mexico by Maj. Harry S. Bryan (61158); portrait in oil of Dr. Charles D. Walcott, Secretary of the

SMITHSONIAN INSTITUTION—Continued.
Smithsonian Institution, by Ossip Perelma (61287).

Bureau of American Ethnology: 16 ethnological objects of the Guiana Indians, presented to the Bureau by Dr. Walter E. Roth (60049, 60452); archeological material and human bones, gathered by Mr. Neil M. Judd in Utah during June and July, 1916, under the joint auspices of the National Museum and the Bureau (60194); earthenware vessels, etc., found by Mr. Joseph Dame in Millard County, Utah (60195); archeological objects and skeletal material, gathered by Dr. Walter Hough at the Luna pit village in New Mexico during the summer of 1916, under the joint auspices of the National Museum and the Bureau (60196); 17 prehistoric pottery vessels, a piece of matting and a few small objects, collected by Mr. F. W. Hodge in 1913, in a cist in a cave in the southern wall of Cibollita valley, Valencia County, N. Mex. (60453); 27 archeological specimens collected by Dr. J. Walter Fewkes from ancient ruins near Gallup, N. Mex. (60502); a small black-ware vase from New Mexico and an Assiniboin headdress from Alberta, Canada, presented to the Bureau by Mr. Robert H. Chapman (60826, 61007); 12 stone artifacts from Reeves Mill, near Pitman, N. J., presented to the Bureau by Mrs. M. B. C. Shuman (60836); small collection of archeological objects of earthenware, jadeite, etc., from the Kiché district of Totonicapan, Guatemala (61097); skulls, skeletons and parts of skeletons, some of which are embedded in rock, from the vicinity of Vero and Fort Myers, Fla., and an Indian ornament and piece of pottery embedded in stone and several pottery fragments, from a burial mound on Indian River, near Vero, collected by Dr. Aleš Hrdlička during October and November, 1916, under the joint auspices of the National Museum and the Bureau (61291). (See under Interior, Department of, National Park Service.)

SMITHSONIAN INSTITUTION—Continued.

National Museum, collected by members of the staff: Bassler, R. S.: 20 exhibition specimens of the fossil alga *Stromatocerium*, and about 200 large fossil corals for the preparation of an exhibition coral reef (60135). Holmes, William H.: 5 stone implements from Sink Hole Mica Mine, Yancy County, N. C. (60705). Hough, Walter: Archeological and ethnological material from Arizona (60336). Hrdlička, Aleš: Small collection of phosphatic concretions obtained in the hills near Cheyenne River Agency, S. Dak. (60127); fossil mollusks and muck containing fossil leaves, from Vero, Fla. (60476). Maxon, William R.: 155 specimens of plants from North Carolina and Maryland (60424, 61174). Maxon, William R., and Paul C. Standley: 75 specimens of plants from the District of Columbia and vicinity (60320). Merrill, George P.: 3 specimens of igneous rocks from Maine (60264). O'Dwyer, H. A.: Snake and a toad, from Virginia (59972, 60149). Palmer, William: Geological material, mammals, reptiles, fishes, invertebrates, birds, plants and insects, from the mountains of western Cuba, Province of Pinar del Rio (60952); 10 lizards and 2 frogs from Florida (60998). Resser, C. E.: 250 Lower Ordovician fossils from western Maryland (60134). Standley, Paul C.: 5,000 specimens of plants from New Mexico, and 14 land shells (60258). Wherry, Edgar T.: 100 geodes from Warsaw, Ill. (61163); cassiterite and wolframite from Hill City, S. Dak. (61221).

National Museum, obtained by purchase: 50 specimens of North American algae, Phycotheca Boreali-Americana, Fascicle XLIII (60181); 25 specimens of mosses, North American Musci Pleurocarpi

SMITHSONIAN INSTITUTION—Continued. (60951); Musci Acrocarpi Boreali-Americanae, Fascicle XV (61086); miscellaneous collections of plants, namely, 43 specimens from Alberta, Canada (60179), 79 from Missouri (61048), 143 from Yucatan collected by Dr. G. F. Gaumer (60734), 25 from Venezuela (60467), 69 from Patagonia and Tierra del Fuego (60060), 654 from East Africa (59965, 60803, 61076), 875 from China collected by Mr. Camillo Schneider (60256); 300 specimens of plants, 49 samples of woods, 13 pieces of balata and a sheet of plantation rubber, from Surinam (60561, 60579); brains of 11 gorillas and 3 chimpanzees from Bakoko District, the Cameroons, Africa (60296); porpoise skeleton from South Africa (60761); skin of a puma and of a sloth from Dutch Guiana (60587); 13 bird skins from Sakhalin Island, Japan (60799); hawksbill turtle from Florida (61123); specimen of *Peripatus* from the Arfak Mountains, New Guinea (60365); 2 Lepidoptera, *Megathymus cofaqui*, from Florida (61050); 135 Lepidoptera (61269); 24 mollusks from various localities (60922); 23 type preparations of rotifers (59981); skull and lower jaws of a fossil horse from Yukon Territory (60095); skull of a fossil musk-ox, *Simbos cavifrons*, from Miami County, Ind. (60856); collection of fossil reptilian remains from the Permian formation of Texas (61281); specimen of the MacKinney, Collin County, Tex., meteoric stone (60695); 9 fragments of meteorites (60581); 6 specimens illustrating the occurrence of the mineral glauberite (60068); specimen of hübnerite from White Pine County, Nev. (61090); 10 pounds of Chile nitre (60131); plaster copy of the bust of Abraham Lincoln modeled from life in 1860 by Leonard W. Volk and now in the Metropolitan Museum of Art (61000); aboriginal soapstone pipe from the District of Columbia (60571); large spearhead of white flint from Pinellas County, Fla. (60132); a Mexican picture-writing (61183); necklace of the Zuñi Indians, New Mexico (60824); collection of anthropological and textile objects of the latter part of the 18th century (60757); obsolete type of shotgun (60779); rare old American clock (60200).

National Museum, made in the Anthropological Laboratory: 3 plaster casts of a bird-shaped amulet found at Eagle Springs, N. C., the original of which is the property of Mr. Thomas B. Wilder, Aberdeen, N. C. (60426); 3 plaster casts each of a large ax found in a washout on the banks of the Des Moines River in Clark County, Mo., and of an effigy duck pipe found in Hamilton County, Ohio, the originals of which are the property of Mr. J. G. Braecklein, Kansas City, Mo. (60428); 3 plaster casts of "Quetzalcoatl," Feathered Serpent Deity (60830); lay figure of a Japanese wood-cut printer (61212); cast of a restored skull of "fossil" man from Vero, Fla. (61053); 3 casts each of 5 chert blades found on the north side of the Mackinaw River, Tazewell County, Ill., the originals of which are the property of Mr. Frank W. Aldrich, Bloomington, Ill. (61230).

National Museum, made in the Laboratory of Mineral Technology: Model showing the occurrence and mining of tin (60076); 2 models showing the occurrence, extraction and refining of oil and gas (60077, 61151); model showing the occurrence and mining of sulphur (60086); model showing the manufacture of lime (61058); key model to accession 59577, the Copper Queen mine section (61270).

National Museum, made in the Laboratory of Wood Technology: Model of typical wood-preserving plant, showing treatment of ties, poles and posts by chemical preservatives (61299).

SMITHSONIAN INSTITUTION—Continued.
National Zoological Park: Head of a kangaroo, *Macropus robustus* (60137); dingo, *Canis dingo* (60226); skull and scalp of an African elephant, *Elephas oxyotis* (60489); tapir (60899); 9 birds—swan, *Olor* species, anhinga, *Anhinga anhinga*, wood duck, *aix sponsa*, 2 specimens of inca dove, *Scardafella inca*, 2 specimens of eider, *Somateria dresseri*, hybrid quail, *Callipepla* x *Colinus*, and Lilford's crane, *Grus lilfordi* (60920); 6 eggs of an emu, *Dromiceius novæhollandiæ*, 5 of a Cape Barren goose, *Cereopsis novæhollandiæ*, 1 of a cinereous vulture, *Vultur monachus*, and 1 of a griffon vulture, *Gyps fulvus* (60975); harpy eagle, *Thrasaëtos harpyia*, and pintail, *Dafila acuta* (61055); crested porcupine (61085); Australian opossum, *Trichosurus vulpecula*, and coypu, *Myocastor coypus* (61132); wild boar (61191); wild guinea pig, *Cavia tschudii pallidior* (61196); snake (61250); emerald spotted dove, *Chalcopelia afra*, and yellow rail, *Coturnicops noveboracensis* (61255).

SNYDER, Dr. J. O., Stanford University, Cal.: About 132 lizards from the Hawaiian Islands (61031).

SNYDER, J. Y., Shreveport, La. (through U. S. Geological Survey): 30 specimens, representing 13 species, of Eocene fossils, from a 30-foot water well in Webster Parish, La. (60122).

SNYDER, W. M., Washington, D. C.: Silver thaler of Austria, issued in 1767 (60497, loan); 2 Mexican bronze coins—a cuartilla issued in 1829 and an octavo issued in 1842 (60508).

SOUTH DAKOTA, UNIVERSITY OF, Vermillion, S. Dak.: 59 specimens of plants from South Dakota (60540).

SOUTHERN BIOLOGICAL SUPPLY CO., New Orleans, La.: 74 specimens, representing 31 species, of mollusks from Louisiana (60623, 60773).

SOWERBY, ARTHUR DEC., Tientsin, China: 186 bird skins, 44 mammals, 16 fishes, 16 crustaceans, 421 shells and a reptile, from Manchuria and northern China (61141, collected for the Museum).

SPEAKMAN, E. G., Washington, D. C.: Small block of ironstone fractured geometrically, giving figures suggesting plates of a tortoise (a natural formation), found on bank of the Rappahannock River opposite Falmouth, Va. (61206).

SPIDEL, Mrs. R. H. H., Washington, D. C.: Wooden doll of the early part of the 19th century (61025, loan).

SPILLMAN, Prof. W. J., U. S. Department of Agriculture, Washington, D. C.: Specimen of a plant, *Selaginella*, from Georgia (60229).

SPRINGER, Hon. FRANK, East Las Vegas, N. Mex.: 15 specimens, representing the types of 9 species of Paleozoic fossils (61036).

STANDLEY, Miss JEANETTE P., Fort Myers, Fla.: 691 specimens of plants from Florida (60298, 60310, 60404, 60418, 60805).

STANDLEY, PAUL C., U. S. National Museum: Skull of a black bear from New Mexico (60274); 150 specimens of plants from Florida (60928).

STARR, DOUGLAS N., Washington, D. C.: 2 canines of the saber-toothed tiger, a bison tooth, and 5 incisors of carnivores (60814, loan).

STATE, DEPARTMENT OF: Engrossed copy of the commission issued to John Bigelow as Envoy Extraordinary and Minister Plenipotentiary of the United States to France, on March 15, 1865 (60055).

STEELE, E. S., U. S. National Museum: 1,573 specimens of plants from the eastern United States (60649).

STEINER, E. A., Breckenridge, Colo.: Receipt for wharfage of sundries consigned to the U. S. S. *Constitution*, dated July 30, 1798, and a Confederate States Pay Department voucher, dated December 24, 1862, in original cover (60004).

STERKI, Dr. V., New Philadelphia, Ohio: Murine opossum (60668).

STERRETT, Mrs. DOUGLAS B., Washington, D. C.: Sword owned during the War of the Revolution by Col. Jonas Johnston, North Carolina Militia (60549, loan).

STEVENS, Mrs. DAISY MCLAURIN-, Brandon, Miss.: Dress worn by Mrs. Stevens, president general of the United Daughters of the Confederacy, on the occasion of the presentation by her, on behalf of that society, of the Confederate monument at Arlington, Va., to the United States Government, June 4, 1914 (60356).

STEVENS & HOLLAND. (See under Vasco Mining Co.)

STOCKWELL, ELIAS HOWE, New York City: Original sewing machine made and patented by Elias Howe, jr. (60532, loan); portrait in oil of Elias Howe, jr. (60559).

STROHKIRCH, A. H. L. W., U. S. National Museum: 4 turtles and 3 eggs, from Alexandria County, Va. (60003).

STUBTEVANT, A. H., New York City: Types of Diptera, *Sarcophaga magna*, *S. excisa* and *S. deceptiva*, described by Mr. J. M. Aldrich (60687).

SUEDETEX GLOVE CO., INC., New York City: 3 samples of cotton glove cloth, "Suedetex," and 3 pairs of gloves made therefrom (60793).

SUPREME COURT OF THE DISTRICT OF COLUMBIA, Washington, D. C. (through Chief Justice J. Harry Covington): 4 paintings in oil, of George Washington, Andrew Jackson, Henry Clay and W. W. Corcoran (60704, loan).

SUTTON, ARTHUR B., Nassau, New Providence, Bahama Islands (through Dr. T. Wayland Vaughan): Sample of marl from Andros Island (60696).

SWEET, HENRY N., Boston, Mass.: A set of 6 enlargements from negatives made by the donor in 1889 when at Chichen Itza, Yucatan (60052).

SYDNEY, NEW SOUTH WALES, AUSTRALIA, BOTANIC GARDENS: 200 specimens of Australian plants (59983, 61104, exchange).

SYDNEY, NEW SOUTH WALES, AUSTRALIA, DEPARTMENT OF MINES: Rocks, minerals and ores, from New South Wales (60986, exchange).

TABER, Prof. STEPHEN, University of South Carolina, Columbia, S. C.: 2 concretions from the Marcellus shale along the east shore of Cayuga Lake, 3 miles south of Union Springs, N. Y. (60434, exchange).

TALBOTT, Mrs. L. C. (See under King, Mrs. Horatio.)

TASKER, Miss VIOLA, U. S. National Museum: Living specimen of a cactus, *Nyctocereus* (60312).

TAVEAU, A. L., Altamonte Springs, Fla. (through Dr. C. N. Fenner and Dr. T. Wayland Vaughan): A small collection of fossils, from Florida (60015).

TAYLOR, Mrs. FANNIE, Mora, Wash. (through Dr. Leo J. Frachtenberg): A house post and a collection of basketry, rattles and other specimens of Quileute Indian culture (60982).

TAYLOR-FRIEDSAM CO., THE, New York City: 24 samples of plain ribbons and 17 of fancy ribbons, manufactured at Paterson, N. J. (61043).

TEJADA, Dr. RAFAEL, Guatemala City, Guatemala: 10 specimens of plants from Guatemala (60742).

TELAUTOGRAPH CORPORATION, New York City: A telautograph transmitter and receiver (60872, loan).

THOMAS, C. A., Kennett Square, Pa.: Wood-tortoise, *Clemmys insculpta*, from Pennsylvania (60260).

THOMAS, R. K., Cripple Creek, Colo. (through U. S. Geological Survey): 2 samples of barite from a deposit near Hartsel, Park County, Colo. (60551).

THOMPSON, H. S., Laceyville, Pa. (through Bureau of Fisheries): 2 specimens of *Unio complanatus* and 1 of *Lampsilis luteola*, from Laceyville (60301).

THOMPSON, Dr. J. C., U. S. Navy, San Diego, Cal.: 129 reptiles and batrachians, mainly from California (60066, 60228, 61216). (See under Kellers, H. C.; Ruby, D. A.; and Wegeforth, Paul.)

THORNBURGH, VERN, Lincoln, Nebr.: 2 brown jasper knives from Nebraska (60366, exchange).

THORPE, Lieut. Col. G. C., U. S. Marine Corps, Washington, D. C.: 13 specimens, mainly ethnological, from Abyssinia, and a Japanese matchlock gun (60676, 60869). Loan.

TIDESTROM, IVAR, Bureau of Plant Industry, Washington, D. C.: 643 specimens of plants, mainly from the United States (60030, 60074, 60257, 60377, 60423, 61113, 61173).

TIERNEY, LEWIS E., Anacostia, D. C.: Larva of a rhinoceros beetle, *Dynastes tityus* (60213).

TOLMAN, RUEL P., U. S. National Museum: 3 miniatures and material for miniature painting (60047); 2 etchings by G. B. Castiglione (1616–1670) (61236).

TREADWELL, Dr. AARON L., Vassar College, Poughkeepsie, N. Y.: Worm, *Leodice culebra*, from Guanica Bay, P. R. (60980).

TREASURY DEPARTMENT:

Bureau of the Public Health Service: Rat with supernumerary hind legs (60456).

Supervising Architect's Office: Small block of sandstone from Tenino, Wash. (60282).

U. S. Customs Service: Bird of paradise plume, received from the deputy collector at Key West, Fla. (60927).

TRENCHARD, EDWARD, Babylon, N. Y.: Collection of Japanese curios obtained by Admiral Trenchard during the diplomatic cruise of the U. S. S. *Powhatan*, 1859–1860 (60168, 60780). Loan.

TUCKERMAN, Miss EMILY, Washington, D. C.: 24 engravings, 44 photographs and a lithograph (60329); 2 oil paintings, "Hindoo Merchants," by Edwin Lord Weeks, and "Landscape," by Herman Saftleven (60335, loan).

TUCKERMAN, Mrs. WALTER R., Edgewood, Md.: Portrait of Joseph Tuckerman, D. D., by Gilbert Stuart (61180, loan).

TURTON, Lieut. Col. W. H., Clifton, Bristol, England: 100 species of marine mollusks (60167, exchange).

TWEEDLIE, ROBERT, Balboa, Canal Zone: 6 crustaceans collected in Panama by the donor in 1912 (59984).

TYLER, JOHN G., Fresno, Cal.: Skin of a California thrasher, *Toxostoma redivivum*, from San Diego County (60693).

UDDEN, J. A., Austin, Tex. (through Dr. O. P. Hay): Part of a mastodon tooth (60647).

UHLENHUTH, Dr. E., Rockefeller Institute for Medical Research, New York City: Salamander, *Plethodon glutinosus*, from Texas (60624).

ULKE, TITUS, U. S. Patent Office, Washington, D. C.: Alcyonarian, *Primnoa* sp., dredged on the coast near Petersburg, Alaska (60286); 16 specimens of plants from the District of Columbia and vicinity (60607, 60651, 60673); 28 insects from Mount Rainier, Wash. (60725).

UNDERWOOD, Capt. R. O., U. S. Marine Corps, Port-au-Prince, Haiti: 3 Voodoo drums from Haiti (60237).

UNITED STATES CAPITOL: Marble statue, "The Dying Tecumseh," by Chevalier Ferdinand Pettrich (60146); 2 oil paintings — Portrait of Benjamin West, by himself, and Portrait of Joseph Henry, the first Secretary of the Smithsonian Institution, by Henry Ulke, 1875 (60825, 60829).

UNIVERSITETETS BOTANISKE MUSEUM. (See under Copenhagen, Denmark.)

UPHAM, Mrs. E. P., Washington, D. C.: Canada warbler, *Wilsonia canadensis*, from Washington (61195).

UTAH COPPER CO., Salt Lake City, Utah: Model of the Bingham Canyon copper mine (61272).

VANDERBILT, Mrs. GEORGE W., Washington, D. C.: The plants and books of the Biltmore Herbarium (Biltmore, N. C.), that were salvaged after the flood of July 15, 16, 1916, which destroyed the greater part of this important collection, the former numbering about 25,000 specimens; also 1 compound and 3 dissecting microscopes (61193).

VANDERPOEL, Mrs. E. N., New York City (through Mr. William T. Evans): Oil painting, "On the Lagoon, Venice," by R. Swain Gifford (60914).

VAN DYKE, EDWIN C., University of California, Berkeley, Cal.: Paratypes of 4 species of beetles described by the donor (60721).

VAN SCHAICK, Mrs. LOUIS J., Cobleskill, N. Y.: 5 pottery vases and a stone maul, collected by Capt. Louis J. Van Schaick, U. S. Army, at Colonia Dublan, Chihuahua, Mexico, during the summer of 1916 (60232, loan).

VAN SENDEN, H. W. (See under Browne, Herbert J.)

VASCO MINING Co. and STEVENS & HOLLAND, Boulder, Colo.: Large specimen of ferberite ore from Boulder County, Colo. (61164).

VENICE MARINE BIOLOGICAL STATION, UNIVERSITY OF SOUTHERN CALIFORNIA, Venice, Cal. (through Dr. A. B. Ulrey, director): 153 species, about 1,991 specimens, of crustaceans, collected in the vicinity of Venice by the *Anton Dohrn* (60558).

VON HAGEN, Dr. H. J., Atlantic City, N. J.: Cretaceous and Tertiary fossils, etc., from oil test well at Millville, N. J. (61080).

VORHIES, C. T., Kayenta, Ariz.: 5 living specimens of cacti from Arizona (60400).

WADE, BRUCE, Johns Hopkins University, Baltimore, Md.: 500 Cretaceous bryozoans from western Tennessee (60733).

WADSWORTH, Hon. JAMES W., jr. (See under Ellicott, Charles.)

WAGNER, ROY S., Fresno, Cal.: About 220 beetles (61222).

WALCOTT, Dr. CHARLES D., Secretary, Smithsonian Institution: A porcupine (60670).

WALKER, BRYANT, Detroit, Mich.: 2 mollusks, topotypes of *Fluminicola nevadensis*, from Nevada (60170).

WALLIS, G. HARRY, Nottingham, England: A Maynard revolver, a powder flask and a bullet mold (60706).

WALLIS, W. W., Washington, D. C.: 4 specimens of luminous Collembola (60102).

WALLS, JOHN A., Galena, Md.: 2 United States silver dimes issued, respectively, in 1814 and 1834 (60915).

WALTER, Mrs. MARY T., Washington, D. C.: 3 specimens of plants, *Cypripedium*, from New York (61218).

WALTON, W. R., Bureau of Entomology, Washington, D. C.: Diptera, consisting of 2 specimens of *Mauromyia pulla*, 1 of *Sumichrastia aurea*, and the type of *Neophyto nocturnalis* (60613).

WALTON & SPENCER Co., Chicago, Ill.: 35 specimens of offset printing (60974).

WAR DEPARTMENT:

Album of a selection of the flora of Palestine, bound in olivewood boards (60923).

Army Medical Museum: Human skull brought from Hawaii by Dr. E. F. King, of Washington (60393).

Bureau of Insular Affairs: Set of the current postage stamps of the Philippine Islands (60885, purchase).

U. S. Engineer Office (through Lt. Col. W. B. Ladue, Jacksonville, Fla.): 2 specimens of wood infested with mollusks, *Martesia striata* and *Xylotrya gouldi*, from a barge used in dredging at Tampa, Fla. (60555).

WARD, Mrs. COONLEY, Wyoming, N. Y.: Cast of an iron meteorite found in January, 1900, 2 miles from Boogaldi post office, New South Wales (60395).

WARD'S NATURAL SCIENCE ESTABLISHMENT, Rochester, N. Y.: 904-gram slice of the N'Goureyma meteorite (60522, exchange); 32 grams of the Bath, S. Dak., meteorite

WARD'S NATURAL SCIENCE ESTABLISHMENT—Continued.
(60560, exchange); 22 minerals (60745, exchange); 45-gram specimen of the Yensigahara, Japan, meteoric stone (60775, exchange); 9 specimens, representing 9 new species, of fossil insects (60801, exchange); 76 grams of the Marion, Linn County, Iowa, meteoric stone (60940, exchange); fragments weighing 7 grams of the Weston, Conn., meteoric stone (60976, exchange).

WARNES, JAMES, Chicago, Ill.: Scarf pin set with a cluster of quartz crystals (60898).

WARREN, Miss ELIZABETH CUSHING. (See under Barry, Mrs. Sarah Maria.)

WASHBURN, Mrs. MARTHA, Neah Bay, Wash.: 2 baskets made by the Makah Indians, Neah Bay (60531).

WATSON, Rear Admiral JOHN C., U. S. Navy (retired). (See under Farragut, Loyall, Estate of.)

WAY, Miss EVELYN D., Seattle, Wash.: 10 specimens, 3 species, of crabs collected at Friday Harbor, Wash. (60739).

WAYNE, ARTHUR T., Mt. Pleasant, S. C.: 3 bird skins from South Carolina (60635).

WEBB, WALTER D., jr., Washington, D. C.: An isopod and 2 earthworms, collected at Mesa, Ariz., and 65 crustaceans from the vicinity of Plummer's Island, Md. (61032).

WEBER, C. M., Balabac, P. I.: 8 mollusks, *Amphidromus quadrasi*, from Dalawan Bay, Balabac Island (60007).

WEBSTER, R. T., Palmyra, N. Y.: Plaster cast of an Indian pipe found on a prehistoric camp site on Ganargua Creek, 2 miles west of Palmyra (60459).

WEEKS, W. H., Brooklyn, N. Y.: 7 mollusks, consisting of 3 specimens of *Conus mercator* from Senegal, and 2 specimens each of *Ancilla balteata* var. *niveus* and *A. balteata*, from the Moluccas (61220, exchange).

WEGEFORTH, Dr. PAUL, San Diego, Cal. (through Dr. J. C. Thompson, U. S. Navy): Reptiles and batrachians from Lower California (60227).

WEILLS, ISAAC M., Vero, Fla.: 4 turtle shells from Florida (60475); fragments of pottery from the fossil-bearing deposits at Vero (61296).

WEISS, H. B., New Brunswick, N. J.: 2 beetles, *Cholus forbesii?* (60716).

WELCH, PAUL S., Kansas State Agricultural College, Manhattan, Kans.: 6 paratypes of a dipteran, *Psychoda albimaculata* (60738).

WERTH, Mrs. MARY MAURY, Richmond, Va.: Ribbon of the Grand Cross of the Order of Our Lady of Guadaloupe, presented by Emperor Maximilian of Mexico to Matthew Fontaine Maury in 1866, in recognition of his service to science (61040).

WESTOVER, M. F., Schenectady, N. Y. (through U. S. Geological Survey): Mica crystal from Sydenham, Ontario (60008).

WETMORE, ALEXANDER, Bureau of Biological Survey, Washington, D. C.: Long-tailed duck, *Harelda hyemalis* (60621); 3 white-winged crossbills, *Loxia leucoptera*, from Virginia and the vicinity of Washington, D. C., and a pine siskin, *Spinus pinus*, from Virginia (61006, 60643).

WHARRAM, S. V., Austinburg, Ohio: Land mollusk, *Omphalina inornata*, from Ohio (61092).

WHERRY, Dr. EDGAR T., U. S. National Museum: 17 specimens of plants and a snake, *Eutaenia*, from the District of Columbia (59996, 60147, 60217); 2 specimens of plants, *Gentiana*, from Virginia (60593).

WIDLER, ELY, Chung King, China (through Mrs. David Fairchild, Washington, D. C.): Piece of Chinese embroidery, 126 by 30 inches, done with silk and metal threads on wool serge (60096, loan).

WILCOX, Mrs. C. B. (through Brig. Gen. Timothy E. Wilcox, U. S. Army, retired, Washington, D. C.): Acoma vase given to Mrs. Wilcox at Fort Huachuca, Ariz., in 1892 (61103).

WILCOX, Dr. G. B., San Francisco, Cal.: Shell of a turtle, *Clemmys insculpta* (59973); 33 specimens of plants from Arizona (59968).

WILEY, Mrs. HARVEY W. (See under Lockwood, Mrs. Belva Ann, Committee on a Tribute to.)

WILEY, Mrs. J. M., Washington, D. C.: 4 oil paintings, "Battle Scene at the Bridge of Celore," by J. C. Bourguignon, "David with Goliath's Head," attributed to Tintoretto, "Supplication of St. Peter," attributed to Correggio, and "The Annunciation," by del Sarto (60466, loan).

WILLETT, G., Los Angeles, Cal.: Mollusks, *Subemarginula yatesii*, from 30 fathoms off Forrester Island, Alaska, and a set of marine mollusks from Forrester Island (60378).

WILLIAMS, FRANK, Salt Lake City, Utah (through Mr. Victor C. Heikes): 11 specimens of zinc ores, showing different types from Queen of the Hills Mine, Ophir, Utah (60280).

WILLIAMS, G. E. S., Washington, D. C.: Photograph of Thomas W. Smillie, for the collection of portraits of the founders of photography in America (60967).

WILLIAMS, H. W., Landover, Md.: Eggs of snake from Maryland (61252).

WILLIAMS, LYMAN T., Omaha, Nebr.: Specimens of parasitic Hymenoptera, *Thripoctenus nubilipennis* (60092).

WILLIAMS, Mrs. WILLIAM A., Wilmington, N. C.: 3 specimens of plants from North Carolina (61128).

WILLIAMSON, E. B., Bluffton, Ind.: 17 Odonata from South and Central America, 2 from Ohio, and a package of food of *Lestes forcipatus* (60214).

WILSON, HERRICK E., Washington, D. C.: 4 recent crinoids, consisting of 2 specimens of *Comanthus solaster* and 2 of *Tropiometra macrodiscus*, from Misaki, Japan (60608); iron hatchet of colonial times, found on the side of a gravel pit on Flat Rock Creek, south of St. Paul, Ind. (60390).

WILSON, Hon. WOODROW, The White House: Silver drum presented to Jacob Booze, drummer, Company C, First New Jersey Volunteers, by the officers of his regiment, in recognition of his fidelity and bravery during the Civil War (60827).

WINECOFF, Dr. THOMAS E., Fort Yukon, Alaska: Skin of a mourning dove, *Zenaidura macroura carolinensis*, from Ft. Yukon (60465); 75 fresh-water mollusks from the lakes around Fort Yukon (61003).

WINGFIELD, Miss MAUD, Ritta, Fla.: Female specimen of round-tailed muskrat, *Neofiber*, and 2 young (60862).

WOLF, SIMON. (See under Lichtenauer, J. Mortimer.)

WOLFGANG, HARRY G., Leetonia, Ohio (through U. S. Department of Agriculture): Parasitic copepod, *Argulus trilineata* (60690).

WOOD, N. R., U. S. National Museum: Three lizards, a turtle, head of a turtle, a fish, and a frog, from Florida (60906, 61010).

WOODWARD, RICHARD W., New Haven, Conn.: 5 specimens of grasses, *Panicum*, from New England (61019).

WOOTON, E. O., Bureau of Plant Industry, Washington, D. C.: Specimen of fungus from New Mexico (60422).

WORCH, HUGO, Washington, D. C.: 28 musical instruments, consisting of pianos, spinets, clavichords, organs, etc.—additions to The Hugo Worch Collection (60050, 61285).

WORTHAM, GARLAND, Washington, D. C.: Bird's nest built in lantern frame (60737).

WORTHINGTON, CLARKE, Staunton, Va.: Varying hare, *Lepus americanus virginianus* (60652).

WRENN, J. L., Falls Church, Va.: 2 beetles, *Saperda obliqua* and *Elater rubricollis* (60103).

WRIGHT, Mrs. CHARLES E., Washington, D. C.: Hand-embroidered scarf purchased by the donor in Weimar, Germany (60157).

WURZLOW, E. C., Houma, La.: 9 specimens of plants, *Meibomia*, from Louisiana (60382).

WYOMING, UNIVERSITY OF, Laramie, Wyo. (through Prof. Aven Nelson): Type specimens of 2 species of plants, *Aquilegia* (61112).

YALE UNIVERSITY, New Haven, Conn.:

Peabody Museum of Natural History: Cast of a specimen pertaining to the fossil bird *Diatryma gigantea*, received through the American Museum of Natural History (60813, exchange).

YANERT, WILLIAM, Rampart, Alaska (through Mr. A. G. Maddren, U. S. Geological Survey): Portion of a fossil skull of *Boötherium*, a species of the musk-ox family, from near Rampart (60728).

YELLOWSTONE NATIONAL PARK. (See under Interior, Department of.)

YOUNG, Miss MARY VIRGINIA, U. S. National Museum: 12 specimens of 4-color halftone reliefs (60169).

YOUNG, Prof. R. T., University, N. Dak.: 13 specimens representing 2 species of crustaceans, and an insect larva, from Creel Bay (60303).

YOUNT, ALLEN, Olney, Ill.: Baltimore oriole, *Icterus galbula*, from Illinois (60360).

ZEESE-WILKINSON Co., New York City (through Mr. William J. Wilkinson): 81 specimens illustrating the making of line cuts and halftone engravings (60392).

ZETEK, JAMES, Ancon, Canal Zone: 56 specimens, 18 species, of marine shells from Taboga Island, Panama (60162); 712 mollusks from Panama (60326, 60588, 61176, 61178, 61263); bottom sample of mud brought up with the chains of the buoys at the entrance to the Pacific side of the Panama Canal (60847).

ZIMMERMAN, Mrs. MARGARET E., New York City (through Mrs. Julian-James): Silk dress of the early part of the 19th century (60190).

LIST OF PUBLICATIONS OF THE U. S. NATIONAL MUSEUM ISSUED DURING THE FISCAL YEAR 1916–1917, AND OF PAPERS PUBLISHED ELSEWHERE WHICH RELATE TO THE COLLECTIONS.

PUBLICATIONS OF THE MUSEUM.

PROCEEDINGS.

Smithsonian Institution | United States National Museum | — | Proceedings | of the | United States National Museum | — | Volume 50 | — | (Seal) | Washington | Government Printing Office | 1916

8vo., pp. i-xiv, 1–663, pls. 1–36, 290 figs.

BULLETINS.

Smithsonian Institution | United States National Museum | Bulletin 71 | — | A monograph of the Foraminifera | of the North Pacific Ocean | — | Part VI. Miliolidae | — | By | Joseph Augustine Cushman | Of the Boston Society of Natural History | (Seal) | Washington | Government Printing Office | 1917

8vo., pp. i-vii, 1–108, pls. 1–39, figs. 1–52.

Smithsonian Institution | United States National Museum | Bulletin 93 | — | The sessile barnacles (Cirripedia) contained | in the collections of the U. S. National | Museum; including a monograph | of the American species | By | Henry A. Pilsbry | Special Curator of the Department of Mollusca, Academy | of Natural Sciences of Philadelphia | (Seal) | Washington | Government Printing Office | 1916

8vo., pp. i-xi, 1–366, pls. 1–76, figs. 1–99.

Smithsonian Institution | United States National Museum | Bulletin 96 | — | A synopsis of American early | Tertiary Cheilostome Bryozoa | By | Ferdinand Canu | Of Versailles, France | and | Ray S. Bassler | Of Washington, District of Columbia | Published February 27, 1917 | (Seal) | Washington | Government Printing Office | 1917

8vo., pp. 1–87, pls. 1–6.

Smithsonian Institution | United States National Museum | Bulletin 98 | — | The birds of the Anamba Islands | By | Harry C. Oberholser | Of the Biological Survey, United States Department of Agriculture | (Seal) | Washington | Government Printing Office | 1917 |

8vo., pp. i-v, 1–75, pls. 1, 2.

Smithsonian Institution | United States National Museum | — | Contributions | from the | United States National Herbarium | Volume 16 | — | Systematic investigations | in | phanerogams, ferns, | and mosses | (Seal) | Washington | Government Printing Office | 1912–1916.

8vo., pp. i-xv, 1–389, pls. 1–133, figs. 1–54, 1 map.

Smithsonian Institution | United States National Museum | — | Contributions | from the | United States National Herbarium | Volume 17 | — |Systematic investigations | in lichens and ferns, | grasses and other phanerograms | — | Hasse, Maxon, Hitchcock, | Hitchcock and Chase, | Standley, Cook | (Seal) | Washington | Government Printing Office | 1913–1916

8vo., pp. i-xiv, 1–647, pls. 1–54, figs. 1–149.

PAPERS PUBLISHED IN SEPARATE FORM.

FROM VOLUME 51 OF THE PROCEEDINGS.

No. 2139. Descriptions of new Lepidoptera from Mexico. By Harrison G. Dyar. pp. 1–37.

No. 2140. Descriptions of miscellaneous North American chalcidoid Hymenoptera of the family Eulophidae. By A. A. Girault. pp. 39–52.

No. 2141. Some Diptera (Microdon) from nests of ants. By T. D. A. Cockerell and Hazel Andrews. pp. 53–56, figs. 1, 2.

No. 2142. On the geographical forms of the Philippine elegant titmouse, Pardaliparus elegans (Lesson), with descriptions of three new subspecies. By Edgar Alexander Mearns. pp. 57–65.

No. 2143. Report on Arachnida collected by Messrs. Currie, Caudell, and Dyar in British Columbia. By Nathan Banks. pp. 67–72.

No. 2144. New brachiopods of the genus Spirifer from the Silurian of Maine. By Henry Shaler Williams. pp. 73–80, pl. 1.

No. 2145. Notes on alunite, psilomelanite, and titanite. By Edgar T. Wherry. pp. 81–88.

No. 2146. Some American fossil insects. By T. D. A. Cockerell. pp. 89–106, pl. 2, figs. 1–9.

No. 2147. Descriptions of two extinct mammals of the order Xenarthra from the Pleistocene of Texas. By Oliver P. Hay. pp. 107–123, pls. 3–7.

No. 2148. New North American Hymenoptera of the family Eulophidae. By A. A. Girault. pp. 125–133.

No. 2149. Report on the Japanese macrouroid fishes collected by the United States Fisheries Steamer "Albatross" in 1906, with a synopsis of the genera. By Charles Henry Gilbert and Carl L. Hubbs. pp. 135–214, pls. 8–11.

No. 2150. New and little-known heteropterous Hemiptera in the United States National Museum. By E. Bergroth. pp. 215–239.

No. 2151. A review of the fossil plants in the United States National Museum from the Florissant lake beds at Florissant, Colorado, with descriptions of new species and list of type-specimens. By F. H. Knowlton. pp. 241–297, pls. 12–27.

No. 2152. New genera and species of muscoid flies. By Charles H. T. Townsend. pp. 299–323.

No. 2153. A recently found iron meteorite from Cookeville, Putnam County, Tennessee. By George P. Merrill. pp. 325, 326, pl. 28.

No. 2154. Two new fossil plants from the Triassic of Pennsylvania. By Edgar T. Wherry. pp. 327–329, pls. 29, 30.

No. 2155. Two new land shells from the western states. By Paul Bartsch. pp. 331–333, pl. 31.

No. 2156. A contribution to our knowledge of the white flies of the subfamily Aleyrodinae (Aleyrodidae). By A. L. Quaintance and A. C. Baker. pp. 335–445, pls. 32–77, figs. 1–10.

No. 2157. Notes on the Whitfield County, Georgia, meteoric irons, with new analyses. By George P. Merrill. pp. 447–449, pl. 78.

No. 2158. A Lower Jurassic flora from the Upper Matanuska Valley, Alaska. By F. H. Knowlton. pp. 451–460, pls. 79–82.

No. 2159. Studies of weevils (Rhynchophora) with descriptions of new genera and species. By W. Dwight Pierce. pp. 461–473, figs. 1, 2.

No. 2160. A new mollusk of the genus Pisidium from Alaska, with field notes by G. Dallas Hanna. By Victor Sterki. pp. 475–477, figs. 1, 2.

No. 2161. New Javanese chalcidoid Hymenoptera. By A. A. Girault. pp. 479–485.

No. 2162. A contribution to the invertebrate fauna of the Oligocene beds of Flint River, Georgia. By William Healey Dall. pp. 487–524, pls. 83–88.

No. 2163. A newly found meteoric stone from Lake Okechobee, Florida. By George P. Merrill. pp. 525, 526.

No. 2164. A revision of the rotatorian genera Lepadella and Lophocharis with descriptions of five new species. By Harry K. Harring. pp. 527–568, pls. 89–97.

No. 2165. A new genus and three new species of parasitic isopod crustaceans. By W. P. Hay. pp. 569–574, pls. 98–100.

No. 2166. Summary of the mollusks of the family Alectrionidae of the west coast of America. By William Healey Dall. pp. 575–579.

No. 2167. Descriptions of seven new species of red spiders. By E. A. McGregor. pp. 581–590, pls. 101–107.

No. 2168. Paraphernalia of a Korean sorceress in United States National Museum. By I. M. Casanowicz. pp. 591–597, pls. 108–112.

No. 2169. Mollusks from the type locality of the Choctawhatchee marl. By Wendell C. Mansfield. pp. 599–607, pl. 113.

No. 2170. The California land shells of the Epiphragmophora traskii group. By Paul Bartsch. pp. 609–619, pls. 114–117.

No. 2171. A generic synopsis of the coccinellid larvae in the United States National Museum, with a description of the larva of Hyperaspis binotata Say. By Adam Böving. pp. 621–650, pls. 118–121.

No. 2172. New species and varieties of Foraminifera from the Philippines and adjacent waters. By Joseph A. Cushman. pp. 651–662.

FROM VOLUME 52 OF THE PROCEEDINGS.

No. 2173. A revision of the bembicine wasps of America north of Mexico. By John Bernard Parker. pp. 1–155, figs. 1–230.

No. 2174. North American earthworms of the family Lumbricidae in the collections of the United States National Museum. By Frank Smith. pp. 157–182.

No. 2175. The birds of Bawean Island, Java Sea. By Harry C. Oberholser. pp. 183–198.

No. 2176. Field notes on Virginia Orthoptera. By Henry Fox. pp. 199–234.

No. 2177. Fossil fishes in the collection of the United States National Museum. By Charles R. Eastman. pp. 235–304, pls. 1–23, figs. 1–9.

No. 2178. Monograph of the nearctic Hymenoptera of the genus Bracon Fabricius. By Harold Morrison. pp. 305–343, pls. 24–27.

No. 2179. The variation exhibited by Thamnophis ordinoides (Baird and Girard), a garter snake inhabiting the San Francisco peninsula. By Joseph C. Thompson. pp. 345–366.

No. 2180. Trophodiscus, a new sea star from Kamchatka. By Walter K. Fisher. pp. 367–371, pls. 28–30.

No. 2181. New Tertiary insects. By T. D. A. Cockerell. pp. 373–384, pl. 31.

No. 2182. New species of South Dakota Cretaceous crabs. By Mary J. Rathbun. pp. 385–391, pls. 32, 33.

No. 2183. Diagnoses of new species of marine bivalve mollusks from the northwest coast of America in the collection of the United States National Museum. By William Healey Dall. pp. 393–417.

No. 2184. A new find of meteoric stones near Plainview, Hale County, Texas. By George P. Merrill. pp. 419–422, pls. 34, 35.

No. 2185. Description of a new goby, Garmannia spongicola, from North Carolina. By Lewis Radcliffe. pp. 423–425, 1 fig.

No. 2186. A new species of polychaetous annelid from Panama, with notes on an Hawaiian form. By Aaron L. Treadwell. pp. 427–430, figs. 1–5.

No. 2187. Notice of a new Paleocene mammal, a possible relative of the Titanotheres. By James Williams Gidley. pp. 431–435, pl. 36, 1 fig.

No. 2188. Mammals collected by Dr. W. L. Abbott on the chain of islands lying off the western coast of Sumatra, with descriptions of twenty-eight new species and subspecies. By Marcus Ward Lyon, jr. pp. 437–462.

No. 2189. New species of fossil beetles from Florissant, Colorado. By H. F. Wickham. pp. 463–472, pls. 37–39.

No. 2190. Rotatoria of Los Angeles, California, and vicinity, with descriptions of a new species. By Frank J. Myers. pp. 473–478, pls. 40, 41.

No. 2191. On certain secondary sexual characters in the male ruddy duck, Erismatura jamaicensis (Gmelin). By Alexander Wetmore. pp. 479–482, 1 fig.

No. 2192. Notes on the life history and ecology of the dragonflies (Odonata) of central California and Nevada. By Clarence Hamilton Kennedy. pp. 483–635, figs. 1–404.

No. 2193. Descriptions of new West American marine mollusks and notes on previously described forms. By Paul Bartsch. pp. 637–681, pls. 42–47.

FROM VOLUME 53 OF THE PROCEEDINGS.

No. 2194. North American parasitic copepods belonging to the Lernaeidae with a revision of the entire family. By Charles Branch Wilson. pp. 1–150, pls. 1–21, 4 figs.

No. 2195. Descriptions of thirty-one new species of Hymenoptera. By S. A. Rohwer. pp. 151–176, 1 fig.

No. 2196. Some effects of environment and habit on captive lions. By N. Hollister. pp. 177–193, pls. 22–25, figs. 1, 2.

No. 2197. Descriptions of some new parasitic Hymenoptera. By A. B. Gahan. pp. 195–217.

No. 2198. Description of a new species of mastodon, Gomphotherium elegans, from the Pleistocene of Kansas. By Oliver P. Hay. pp. 219–221, pl. 26.

No. 2199. Gomphus parvidens, a new species of dragonfly from Maryland. By Bertha P. Currie. pp. 223–226, pls. 27, 28.

No. 2200. A remarkable occurrence of calcite in silicified wood. By Edgar T. Wherry. pp. 227–230, pls. 29–31.

No. 2201. An asymmetrical bird-louse found on three different species of troupials. By John Howard Paine. pp. 231, 232, pl. 32.

No. 2202. A report on a collection of Hymenoptera (mostly from California) made by W. M. Giffard. By S. A. Rohwer. pp. 233–249.

No. 2203. A new species of bear-animalcule from the coast of North Carolina. By W. P. Hay. pp. 251–254, pl. 33.

No. 2204. A new American parasite of the Hessian fly (Mayetiola destructor Say). By P. R. Myers. pp. 255–257.

No. 2205. Cuban amphibians and reptiles collected for the United States National Museum from 1899 to 1902. By Leonhard Stejneger. pp. 259–291, figs. 1–128.

No. 2206. An American species of the hymenopterous genus Wesmaelia of Foerster. By P. R. Myers. pp. 293, 294.

No. 2208. The type-species of the genera of the Cynipoidea, or the gall wasps and parasitic cynipoids. By S. A. Rohwer and Margaret M. Fagan. pp. 357–380.

No. 2210. Some fossil insects from Florissant, Colorado. By T. D. A. Cockerell. pp. 389–392.

No. 2211. The salamanders of the genera Desmognathus and Leurognathus. By Emmett R. Dunn. pp. 393–433, figs. 1–15.

No. 2212. Description of a new species of extinct horse, Equus lambei, from the Pleistocene of Yukon Territory. By Oliver P. Hay. pp. 435–443, pls. 56–58.

FROM VOLUME 18 OF CONTRIBUTIONS FROM THE NATIONAL HERBARIUM.

Part 5. Preliminary revision of the genus Inga. By Henry Pittier. pp. i–xi, 173–223, pls. 81–105.

FROM VOLUME 20 OF CONTRIBUTIONS FROM THE NATIONAL HERBARIUM.

Part 1. The Mexican and Central American species of Ficus. By Paul C. Standley. pp. i–viii, 1–35.

CLASSIFIED LIST OF PAPERS BASED WHOLLY OR IN PART ON THE NATIONAL COLLECTIONS.[1]

FINE ARTS.

Catalogue of a loan collection of forty-five paintings illustrating scenes mainly in the National Parks and Monuments of the United States, assembled by the Department of the Interior in the National Gallery of Art in connection with the meeting of the National Parks Conference held in the National Museum, January 2–6, 1917.

City of Washington, Feb., 1917. 6 pp. and paper cover.

Catalogue of a loan collection of portraits and landscapes by Orlando Rouland, new building of the National Museum, foot of Tenth Street, N. W., April 2 to April 30, 1917.

City of Washington, 1917. 4 pp. Folder.

BRIGHAM, GERTRUDE RICHARDSON. The study and enjoyment of pictures.

Sully and Kleinteich, New York, 1917, pp. i–xiii, 1–252.

Contains references to paintings in the National Gallery of Art.

ANTHROPOLOGY.

CASANOWICZ, I. M. Jewish amulets in the United States National Museum.

Journ. Amer. Oriental Soc., 36, 1916, pp. 154–167, 1 pl., 1 fig.

A general survey and description of the National Museum collection of Jewish amulets, a discussion of the motives underlying the use of amulets and their constituent elements, followed by the transcription of the Hebrew text, with English translation, of the most elaborate amulet in the collection, and a full commentary thereon.

——— Paraphernalia of a Korean sorceress in United States National Museum.

Proc. U. S. Nat. Mus., 51, No. 2168, Dec. 21, 1916, pp. 591–597, pls. 108–112.

Discusses briefly the religious history of Korea and treats in detail of the rôle of demonology and magic in the life of the Koreans, with a description of the classes of exorcisers, their functions and practices.

FEWKES, J. WALTER. Animal figures on prehistoric pottery from Mimbres Valley, New Mexico.

Amer. Anthropologist (n. s.), 18, No. 4, Oct.–Dec., 1916, pp. 535–545, figs. 64–75.

Describes and illustrates several composite animals and other figures painted on prehistoric mortuary pottery of the Mimbres Valley, N. Mex. One of the designs represents a seated human being grasping in one hand the dissevered head of a prostrate being, recalling similar representations in Mexican codices. The figure wears a helmet-mask suggesting a personation of the Horned Serpent god.

——— The cliff-ruins in Fewkes Cañon, Mesa Verde National Park, Colorado.

Holmes Anniversary Volume, Washington, Dec. 1, 1916, pp. 96–117, pls. 1–10, figs. 1–12.

An account of the excavation and repair of a large cliff

[1] A few papers published prior to this fiscal year are included, having been inadvertently omitted from previous reports.

FEWKES, J. WALTER—Continued.

dwelling called Oak-Tree House, accompanied with descriptions of Painted House and other ruins, all situated in the cañon west of the promontory on which Sun Temple stands. The field work was carried on in the summer of 1916 by the author, under the Bureau of American Ethnology, in affiliation with the Interior Department. The artifacts figured were mainly obtained from Oak-Tree House and later deposited in the U. S. National Museum by the Interior Department.

——— Prehistoric remains in New Mexico, Colorado, and Utah.

Smithsonian Misc. Colls., 66, No. 17, Apr. 27, 1917, pp. 76–92, figs. 80–97.

An unsigned article, written in the second person, giving a résumé of the archeological explorations of the Smithsonian Institution for the year 1916.

——— Archeological investigations in New Mexico, Colorado, and Utah.

Smithsonian Misc. Colls., 68, No. 1, May, 1917, pp. 1–38, pls. 1–14, figs. 1–16.

A report on archeological field work in the States mentioned during the summer of 1916. A feature of particular interest is the account of ruined towers in Hill Canyon, Utah, the most northern locality in the pueblo area in which stone buildings have yet been recorded. Certain of these ruins are perched on canopy rocks and from their sites are designated Mushroom Rock Ruins. This paper figures four pieces of prehistoric pottery from the ruin near Black Diamond Ranch, N. Mex., obtained on the expedition and deposited in the U. S. National Museum by the Bureau of American Ethnology.

HOLMES, WILLIAM H. Masterpieces of aboriginal American art. V.—The great dragon of Quirigua, Parts I and II.

Art and Arch., 4, No. 6, Dec., 1916, pp. 267–280, 5 pls., 3 figs.; and 5, No. 1, Jan., 1917, pp. 38–49, 4 pls., 3 figs.

These papers treat of the sculptural remains of a people quite lost to history and serve especially, through the illustrations, to convey a clear idea of the remarkable advance of the early occupants of Middle America toward the status of culture known as civilization. The works are shown to be worthy of comparison with the famous masterpieces of the Old World.

——— Archeological explorations in Guatemala and Honduras.

Smithsonian Misc. Colls., 66, No. 17, Apr. 27, 1917, pp. 73–76, figs. 78, 79.

An unsigned article written in the second person for Smithsonian explorations, 1916, being a brief account of a most interesting trip to Guatemala and Honduras, which gave the writer an opportunity to study in some detail the marvelous remains of the culture of the ancient Maya peoples. The ruined cities of Quirigua and Copan were the subject of especial attention.

HOUGH, WALTER. The distribution of man in relation to the invention of fire-making methods.

Amer. Anthropologist (n. s.), 18, No. 2, Apr.–June, 1916, pp. 257–263.

A discussion of the bearing of the invention of fire-making artificially on the migrations of man.

——— The Venice of Mexico.

Nat. Geog. Mag., 30, No. 1, July, 1916, pp. 68–88, illustrated.

A travel-description of the fens and waterways of the Mexican lakes and of the habits and customs of the tribes living in this lacustrine environment.

——— Experimental work in American archeology and ethnology.

Holmes Anniversary Volume, Washington, Dec. 1, 1916, pp. 194–197, 1 pl.

HOUGH, WALTER—Continued.

Treats of the scientific experimental methods by which Prof. Holmes and other members of the Smithsonian staff have advanced the study of aboriginal manufactures and their relation to the history of progress.

——— Installation of ethnological material.

Proc. Amer. Assoc. Museums, 10, 1916, pp. 117–119.

A brief statement of the plans followed in installing the ethnological collections in the U. S. National Museum, with observations on the purpose of the exhibit.

——— A revival of the ancient Hopi pottery art.

Amer. Anthropologist (n. s.), 19, No. 2, Apr.–June, 1917, pp. 322, 323.

Remarks upon the decline of Hopi pottery art and the revival of the ware of the best period by the Hopi women potters of today on their own initiative. The first specimens marking the beginning of this revival are preserved in the U. S. National Museum.

——— Archeological investigations in New Mexico.

Smithsonian Misc. Colls., 66, No. 17, Apr. 27, 1917, pp. 99–103, figs. 104–106.

A summary of the results achieved in the exploration of the site of an ancient pit-village at Luna, N. Mex., in the summer of 1916. The discovery of this pit-village brings forward a new problem in southwestern archeology.

HRDLIČKA, ALEŠ. Goiter among the Indians along the Missouri.

Science (n. s.), 44, No. 1128, Aug. 11, 1916, pp. 203, 204.

Calls attention to the excessive prevalence of goiter in all stages, and attended with considerable disturbance of the circulation, among the Indians along the Missouri River, in the Dakotas.

HRDLIČKA, ALEŠ. The normal dental arch.

The Dental Cosmos, 58, No. 9, Sept., 1916, pp. 1029–1032, 1059–1064.

Sets forth the fact that there is no single universal type of a normal dental arch, but that several distinct types exist both in shape and dimensions which recur under normal conditions and can not but be considered normal types. The paper further points out certain correlations between the type of the arch and the face as a whole, as well as the cranial vault.

——— Indian trap pits along the Missouri.

Amer. Anthropologist (n. s.), 18, No. 4, Oct.–Dec., 1916, pp. 546, 547.

A note on interesting pit traps for hawks and eagles in the Sioux country.

——— The brain collection of the U. S. National Museum.

Science (n. s.), 44, No. 1143, Nov. 24, 1916, p. 739.

A short article calling attention to the invaluable collection of anthropoid and other brains in the division of physical anthropology, and particularly to some recent accessions of the brains of gorillas and chimpansees. The total collection, started by the curator 14 years ago, numbers now approximately 1,500 examples, of which 223 are human, including 128 of other races than whites, while 348 belong to other primates.

——— Anthropology of the Chippewa.

Holmes Anniversary Volume, Washington, Dec. 1, 1916, pp. 198–227, pls. 1–13.

Records observations on a small series of full-blood Chippewa, a contingent which is rapidly disappearing. While a part of the Algonquian stock, the tribe shows numerous more or less aberrant characteristics,

HRDLIČKA, ALEŠ.—Continued.

including a larger and relatively broader head as well as broader face than most of the Eastern Indians. In stature the full-bloods range from medium to tall. The color, physiognomy, hair and visible characteristics in general are wholly of the ordinary Indian type.

——— The Indian service.

Rep. 34th Ann. Lake Mohonk Conf., 1916, pp. 26–33.

Relates mainly to the educational and medical branches of the Service.

——— Conditions among Indians which call for amelioration.

Rep. 34th Ann. Lake Mohonk Conf., 1916, pp. 65–69.

Practically a continuation of previous papers, but touches in addition on the subject of the disappearance of the red race.

——— Preliminary report on finds of supposedly ancient human remains at Vero, Florida.

Journ. Geol., 25, No. 1, Jan.–Feb., 1917, pp. 43–51.

First report by the writer on the Vero remains for which geological antiquity has been claimed. Neither the examinations on the ground, the study of the skeletal parts, nor the various artifacts recovered in their vicinity justify the claim of great age. The remains are plainly Indian and pertain in all probability to a pre-Columbian Indian site and its associated burials. The complete report is in course of publication as Bulletin 66 of the Bureau of American Ethnology.

——— Bohemia and the Czechs.

Nat. Geog. Mag., 31, No. 2, Feb., 1917, pp. 163–187, illustrated.

The object of this paper was to correct the many geographical, racial and political misconceptions about this branch of the Slav people, who are totally distinct from the Huns and Urgian Hungarians, with whom they are often confounded.

HRDLIČKA, ALEŠ.—Continued.

——— The "Melting Pot" a myth.

Journ. Heredity, 8, No. 3, Mar., 1917, pp. 99–105.

Though not bearing the writer's name, this paper is essentially his contribution. It points to some of the results of his studies on the Old Americans, and more particularly to the fact that so far no very close approach to a separate American type of the whites is discoverable. Still some degree of approach to such a type has taken place and it is possible to indicate its main features.

——— Examination into the subject of supposedly ancient human remains at Vero, Florida.

Smithsonian Misc. Colls., 66, No. 17, Apr. 27, 1917, pp. 24–28, figs. 28–30.

——— Trip to Fort Myers region, west coast of Florida.

Smithsonian Misc. Colls., 66, No. 17, Apr. 27, 1917, pp. 28, 29.

——— Anthropological work among the Sioux and Chippewa.

Smithsonian Misc. Colls., 66, No. 17, Apr. 27, 1917, pp. 92–99, figs. 98–103.

The above three articles are brief preliminary reports of a general nature on the subjects indicated by the titles.

JUDD, NEIL M. The use of adobe in prehistoric dwellings of the Southwest.

Holmes Anniversary Volume, Washington, Dec. 1, 1916, pp. 241–252, pls. 1–5.

Describes briefly the several types of prehistoric dwellings in which adobe was utilized as a constructive material and notes the occurrence of such dwellings in various sections of the southwestern United States.

——— Evidence of circular kivas in western Utah ruins.

Amer. Anthropologist (n. s.), 19, No. 1, Jan.–Mar., 1917, pp. 34–40, figs. 3–5.

JUDD, NEIL M.—Continued.

Briefly presents evidence which indicates that the circular rooms found throughout western Utah are in fact kivas and that, culturally at least, they are closely related to similar structures of the San Juan drainage.

——— Archeological reconnoissance in western Utah.

Smithsonian Misc. Colls., 66, No. 17, Apr. 27, 1917, pp. 103–108, figs. 107–112.

An unsigned article on Smithsonian explorations for 1916. Describes work at Paragonah, Utah, on a mound 100 by 300 feet, containing remains of adobe habitations and a kiva, the latter a circular room like those of the mounds at Beaver City. The discovery of the circular ceremonial chamber among the prehistoric house builders of western Utah has an important bearing on a possible cultural relationship of these peoples with the Pueblos.

JUDD, NEIL M.—Continued.

MEANS, PHILIP AINSWORTH. Preliminary survey of the remains of Chippewa settlements on La Pointe Island, Wisconsin.

Smithsonian Misc. Colls., 66, No. 14, Jan., 1917, pp. 1–15, figs. 1, 2.

The author first takes up the location and history of the site visited by him. He then calls attention to several rather serious hindrances to scientific work on La Pointe Island, but later points out the advantage of work on several neighboring islands which were associated with the Chippewa at well-established periods. Gives a brief but fairly comprehensive bibliography of the Chippewa.

PHILATELY.

LEAVY, JOSEPH B. The United States Government collection of postage stamps.

The Philat. Gaz., 6, No. 7, July, 1916, pp. 220, 221; 6, No. 8, Aug., 1916, pp. 249–253; 6, No. 9, Sept., 1916, pp. 282–285; 6, No. 10, Oct., 1916, pp. 316–321; 6, No. 11, Nov., 1916, pp. 350–354; 6, No. 12, Dec., 1916, pp. 385–387; 7, No. 1, Jan., 1917, pp. 28, 29; 7, No. 2, Feb., 1917, pp. 54–60; 7, No. 3, Mar., 1917, pp. 101, 102; 7, No. 4, Apr., 1917, pp. 132–136; 7, No. 5, May, 1917, pp. 164–166; 7, No. 6, June, 1917, pp. 195–198.

A complete and detailed list of the stamps on exhibition in the National Museum. The article will be continued through the current year, taking up the stamps of the various foreign countries in the order of installation.

LEAVY, JOSEPH B. New issue notes.

The Philat. Gaz., 6, No. 7, July, 1916, pp. 208, 209; 6, No. 8, Aug., 1916, p. 234; 6, No. 10, Oct., 1916, pp. 299–301; 6, No. 11, Nov., 1916, pp. 342–344; 6, No. 12, Dec., 1916, pp. 383–385; 7, No. 2, Feb., 1917, pp. 41–44; 7, No. 3, Mar., 1917, pp. 78–80; 7, No. 4, Apr., 1917, pp. 125, 126; 7, No. 5, May, 1917, pp. 158, 159.

A series of notes on new issues of foreign stamps received from the Universal Postal Union at Berne, Switzerland, through the U. S. Post Office Department.

——— Error in current U. S. stamp.

The Philat. Gaz., 7, No. 5, May, 1917, pp. 150, 151.

A description of the circumstances under which 5-cent stamps were recently printed at the Bureau of Engraving and Printing in the color of and on sheets with 2-cent stamps.

MAMMALS.

ANTHONY, H. E. Preliminary report of fossil mammals from Porto Rico with descriptions of a new genus of ground sloth and two new genera of hystricomorph rodents.

Ann. New York Acad. Sci., 27, Aug. 9, 1916, pp. 193–203, pls. 7–14.

——— A new rabbit and a new bat from neotropical regions.

Bull. Amer. Mus. Nat. Hist., 37, Art. 13, May 28, 1917, pp. 335–337, pl. 34.

BAILEY, VERNON. A new subspecies of meadow mouse from Wyoming.

Proc. Biol. Soc. Washington, 30, Feb. 21, 1917, pp. 29, 30.

The type is in the Biological Survey collection.

GOLDMAN, E. A. A new vesper rat from Nicaragua.

Proc. Biol. Soc. Washington, 29, Sept. 6, 1916, pp. 155, 156.

The type is in the Biological Survey collection.

——— New mammals from North and Middle America.

Proc. Biol. Soc. Washington, 30, May 23, 1917, pp. 107–116.

Describes 10 new subspecies including opossums, peccary, rodents and bats, the types of most of which are in the Biological Survey collection.

GRINNELL, JOSEPH. The California lowland mink a distinct race.

Proc. Biol. Soc. Washington, 29, Sept. 22, 1916, pp. 213, 214.

Describes as new: *Mustela vison aestuarina*.

HOLLISTER, N. The type species of Rattus.

Proc. Biol. Soc. Washington, 29, Sept. 22, 1916, pp. 206, 207.

——— Shrews collected by the Congo Expedition of the American Museum.

Bull. Amer. Mus. Nat. Hist., 35, Art. 35, Oct. 21, 1916, pp. 663–680, pls. 7–11.

HOLLISTER, N.—Continued.

Describes 7 new species, the types of which are in the American Museum of Natural History.

——— Three new murine rodents from Africa.

Smithsonian Misc. Colls., 66, No. 10, Oct. 26, 1916, pp. 1–3.

Describes 3 new rats of the genera *Arvicanthis*, *Dasymys* and *Mus*.

——— Some effects of environment and habit on captive lions.

Proc. U. S. Nat. Mus., 53, No. 2196, June 1, 1917, pp. 177–193, pls. 22–25, figs. 1, 2.

Conspicuous changes in color of pelage and in the form of skull occur in lions raised in captivity in the National Zoological Park.

HOWELL, ARTHUR H. Description of a new race of Say's ground squirrel from Wyoming.

Proc. Biol. Soc. Washington, 30, May 23, 1917, pp. 105, 106.

The type is in the Biological Survey collection.

LYON, MARCUS WARD, jr. Mammals collected by Dr. W. L. Abbott on the chain of islands lying off the western coast of Sumatra, with descriptions of twenty-eight new species and subspecies.

Proc. U. S. Nat. Mus., 52, No. 2188, Dec. 30, 1916, pp. 437–462.

The material was obtained during several voyages among the islands and is all, including the types, in the U. S. National Museum.

——— Two new mammals from Sumatra.

Proc. Biol. Soc. Washington, 29, Sept. 22, 1916, pp. 209–212.

Describes 2 new forms of rats. Both types are in the U. S. National Museum.

MERRIAM, C. HART. Nineteen apparently new grizzly and brown bears from western America.

Proc. Biol. Soc. Washington, 29, Sept. 6, 1916, pp. 133–154.

Based on about 150 skulls, mostly from British Columbia, Yukon Territory and Alaska, acquired since the author's previous paper describing 30 new bears from North America in 1914. All but one of the types are in the U. S. National Museum and Biological Survey collections.

——— Ovis sheldoni, a new mountain sheep from Sierra Del Rosario, Sonora, Mexico.

Proc. Biol. Soc. Washington, 29, Sept. 6, 1916, pp. 129–132.

A dwarf form from an isolated mountain range surrounded by deserts in northern Mexico. The type is in the Biological Survey collection.

MILLER, GERRIT S., jr. Bones of mammals from Indian sites in Cuba and Santo Domingo.

Smithsonian Misc. Colls., 66, No. 12, Dec. 7, 1916, pp. 1–10, pl. 1.

Describes as new genera and species, two mammals related to the South American spiny-rats. The material was obtained as samples of the food of pre-Columbian man during explorations carried on by the Museum of the American Indian, Heye Foundation, New York. The types were presented to the U. S. National Museum by Mr. Heye.

——— The teeth of a monkey found in Cuba.

Smithsonian Misc. Colls., 66, No. 13, Dec. 8, 1916, pp. 1–3, pl. 1.

The type of *Montaneia anthropomorpha* Ameghino supposed to be an extinct monkey peculiar to Cuba, shown to be a spider monkey, probably from South America.

——— Expedition to Borneo and Celebes.

Smithsonian Misc. Colls., 66, No. 17, Apr. 27, 1917, pp. 29–35, figs. 31–37.

MILLER, GERRIT S., jr.—Continued.

Account of work by H. C. Raven in 1916 under the auspices of Dr. W. L. Abbott, with photographs of two Celebean monkeys, *Cynopithecus* and *Macus*.

——— Exploration in China.

Smithsonian Misc. Colls., 66, No. 17, Apr. 27, 1917, pp. 35, 36.

Account of work by Arthur de C. Sowerby in 1916.

SELLARDS, E. H. Human remains and associated fossils from the Pleistocene of Florida.

Eighth Annual Rep. Fla. State Geol. Surv., 1916, pp. 120–168, pls. 15–31, figs. 1–15.

The material which formed the basis of this paper was studied in connection with material in the U. S. National Museum.

STONE, WITMER. The Hawaiian rat.

Occ. Papers Bernice Pauahi Bishop Museum of Polynesian Eth. and Nat. Hist., 3, No. 4, 1917, pp. 3–10, pls. 8–15.

Describes as new: *Rattus hawaiiensis*. Type specimens from the U. S. National Museum collection used for comparison.

SWENK, MYRON HARMON. On a new subspecies of porcupine from Nebraska.

University Studies, Lincoln, Nebr., 16, Nos. 1–2, Nov. 21, 1916, pp. 1–11, pls. 1–3.

THOMAS, OLDFIELD. Preliminary diagnoses of new mammals obtained by the Yale-National Geographic Society Peruvian Expedition.

Smithsonian Misc. Colls., 68, No. 4, Apr. 10, 1917, pp. 1–3.

Describes 11 new forms, mostly rodents, as well as a remarkable new genus and species of marsupial and a new subspecies of vicugna. All but two of the types are in the U. S. National Museum.

BIRDS.

BAILEY, B. H. Krider's hawk (Buteo borealis krideri) in Alaska.

Auk, 33, No. 3, July, 1916, p. 321.

Notes occurrence of this form at Eagle, Alaska.

BARTSCH, PAUL. Birds observed in 1916, in the region of Miami and the Florida Keys from May 15 to June 4, and along the railroad from Key West to Miami on June 24.

Carnegie Inst. of Washington, Year Book No. 15, 1916, pp. 182–188.

Extract from journal, recording birds seen, with annotations.

——— Relationship of Florida herons.

Auk, 34, No. 1, Jan., 1917, p. 86.

Brief note on the habits and relationship of the great white heron and the great blue heron of Florida, maintaining that the two are distinct species and that the name *Ardea occidentalis* should be reserved for the great white heron and *A. herodias wardi* for the great blue heron.

CHAPIN, JAMES P. The classification of the weaver-birds.

Bull. Amer. Mus. Nat. Hist., 37, Art. 9, May 8, 1917, pp. 243–280, pls. 6–10, figs. 1–9.

An important contribution to the classification of the Ploceidæ. Several novel features are introduced, such as the addition of *Parmoptila* to this group, and the removal of the genera *Textor* and *Dinemellia* to a separate family.

CHERRIE, GEORGE K. A contribution to the ornithology of the Orinoco region.

Mus. Brooklyn Inst. Arts and Sci., Sci. Bull., 2, No. 6, Sept. 1, 1916, pp. 133a–374.

Observations on the habits, distribution and relationships of a large number of species collected in the Orinoco region of Venezuela. *Hypolophus canadensis intermedius* is described as new.

COALE, HENRY K. Alaska hermit thrush in northeastern Illinois.

Auk, 34, No. 1, Jan., 1917, p. 92.

Records *Hylocichla guttata guttata* from Lake County, Ill.

COBY, CHARLES B. Descriptions of apparently new South American birds, with notes on some little known species.

Field Mus. Nat. Hist., Pub. 190, *Ornith. Ser.*, 1, No. 10, Aug. 30, 1916, pp. 337–346.

Describes 1 species and 25 subspecies of passerine birds as new, with notes on others.

——— Notes on little known species of South American birds with descriptions of new subspecies.

Field Mus. Nat. Hist., Pub. 193, *Zool. Ser.*, 12, No. 1, Jan. 25, 1917, pp. 3–7, figs. 1–3.

Notes on 3 previously described species and descriptions of 2 new subspecies of pigeons and 1 goatsucker.

FLEMING, J. H. The saw-whet owl of the Queen Charlotte Islands.

Auk, 33, No. 4, Oct., 1916, pp. 420–423.

Cryptoglaux acadica brooksi is described as new.

HANNA, G. DALLAS. Records of birds new to the Pribilof Islands including two new to North America.

Auk, 33, No. 4, Oct., 1916, pp. 400–403.

Clangula clangula clangula and *Fringilla montifringilla* are new to the American fauna, and notes on 19 other species are added.

MCGREGOR, RICHARD C. New or noteworthy Philippine birds, I.

Philippine Journ. Sci., 11, No. 4, Sec. D, July, 1916, pp. 269–277, figs. 1, 2.

Describes *Leucotreron merrilli* as new, and records 5 other species from the Philippines.

MEARNS, EDGAR ALEXANDER. On the geographical forms of the Philippine elegant titmouse, Pardaliparus elegans (Lesson), with descriptions of three new subspecies.

Proc. U. S. Nat. Mus., 51, No. 2142, Oct. 16, 1916, pp. 57–65.

Seven forms are recognized, of which 3 are new. A key to the known subspecies is given, followed by a table of measurements.

NORTON, ARTHUR H. Type of the large-billed puffin.

Auk, 34, No. 2, Apr., 1917, pp. 205, 206.

Designates as type a specimen from Spitzbergen in the U. S. National Museum.

OBERHOLSER, HARRY C. The birds of Bawean Island, Java Sea.

Proc. U. S. Nat. Mus., 52, No. 2175, Feb. 8, 1917, pp. 183–198.

Records 26 species collected by Dr. W. L. Abbott, of which 7 are described as new.

——— Description of a new Sialia from Mexico.

Proc. Biol. Soc. Washington, 30, Feb. 21, 1917, pp. 27, 28.

This new bluebird is described as *Sialia sialis episcopus*.

——— Critical notes on the eastern subspecies of Sitta carolinensis Latham.

Auk, 34, No. 2, Apr., 1917, pp. 181–187.

The name *Sitta carolinensis carolinensis*, the white-breasted nuthatch, is restricted to the Florida form, of which *S. c. atkinsi* and *S. atkinsi litorea* are synonyms. *S. c. cookei* is a new name for the bird of the northeastern States.

——— Notes on North American birds. I.

Auk, 34, No. 2, Apr., 1917, pp. 191–196.

Notes on 7 species and subspecies of doubtful or uncertain status as North American birds.

OBERHOLSER, HARRY C. Diagnosis of a new lanline family of Passeriformes.

Journ. Washington Acad. Sci., 7, No. 7, Apr. 4, 1917, pp. 180, 181.

The family Tylidae is created for the genus *Tylas* of Madagascar.

——— Description of a new genus of Anatidae.

Proc. Biol. Soc. Washington, 30, May 23, 1917, pp. 119, 120.

Horizonetta is a new genus for *Anas laysanensis* Rothschild, the teal inhabiting Laysan Island.

——— The status of Aphelocoma cyanotis and its allies.

Condor, 19, No. 3, June 1, 1917, pp. 94, 95.

This jay is found to be a subspecies of *Aphelocoma californica*, and is restricted to Mexico.

——— Notes on the Fringilline genus Passerherbulus and its nearest allies.

Ohio Journ. Sci., 17, No. 8, June 2, 1917, pp. 332–336.

The genus *Passerherbulus* (with 12 recognized species and subspecies) is divided into 4, of which *Thryospiza* and *Nemospiza* are new.

——— The birds of the Anamba Islands.

Bull. U. S. Nat. Mus., No. 98, June 30, 1917, pp. i–v, 1–75, pls. 1, 2.

An account of the birds of the Anamba Islands, based on collections made by Dr. W. L. Abbott. Fifty-six forms are enumerated, of which 19 subspecies are described as new. Two species from other localities are also designated as new.

RATHBUN, S. F. Description of a new subspecies of the western meadowlark.

Auk, 34, No. 1, Jan., 1917, pp. 68–70.

Sturnella neglecta confluenta is described as a new form.

RICHMOND, CHARLES W. The earliest name for the nighthawk.

Auk, 34, No. 1, Jan., 1917, pp. 88, 89.

Caprimulgus minor Forster, 1771, is shown to antedate *C. virginianus* Gmelin, 1789.

——— A new name for Onychospiza Prjevalski.

Auk, 34, No. 1, Jan., 1917, p. 89.

Onychostruthus is proposed in place of *Onychospiza*, preoccupied.

——— One of the rarest birds.

Auk, 34, No. 2, Apr., 1917, pp. 215–217.

Comments on a paper bearing the above title, and identifies *Callaeops periophthalmicus* with *Terpsiphone nigra*.

——— Explorations in Santo Domingo.

Smithsonian Misc. Colls., 66, No. 17, Apr. 30, 1917, pp. 36–39, figs. 38, 39.

Account of recent explorations in this island by Dr. W. L. Abbott.

RILEY, J. H. Three remarkable new species of birds from Santo Domingo.

Smithsonian Misc Colls., 66, No. 15, Dec. 1, 1916, pp. 1, 2.

Dr. W. L. Abbott, during his visit to Santo Domingo in 1916, made some very interesting discoveries, among them the owl, crossbill and sparrow described in this paper. The crossbill is particularly remarkable as it is closely related to the white-winged species of boreal America and the sparrow belongs to a tropical genus not previously known from the Antilles.

——— An unrecorded bird from the Bahamas.

Auk, 34, No. 2, Apr., 1917, p. 209.

Note on the occurrence of the kingbird (*Tyrannus tyrannus*) on New Providence.

——— A bird new to the North American fauna.

Auk, 34, No. 2, Apr., 1917, p. 210.

Records *Pinicola enucleator kamtschathensis* from St. George Island, Pribilofs, Alaska.

SHUFELDT, R. W. The bird-caves of the Bermudas and their former inhabitants.

Ibis, ser. 10, 4, No. 4, Oct., 1916, pp. 623–635, pl. 20.

Gives an account of a cave formerly inhabited by petrels, and describes *Puffinus mcgalli*, *P. parvus*, and *Æstrelata vociferans* from their osseous remains.

——— Eggs of North American water birds (Part V).

Blue Bird, 8, No. 9, Oct., 1916, pp. 6–14, pls. 12–14.

An account of the eggs of North American kittiwakes and gulls.

——— Efforts to save the birds.

Amer. Forestry, 23, No. 278, Feb., 1917, pp. 103, 104, 2 figs.

Notes on several extinct species, with a plea to preserve others approaching extermination.

STONE, WITMER. A new hummingbird from Colombia.

Proc. Acad. Nat. Sci. Phila., June 8, 1917, pp. 203, 204.

Lepidopyga lilliæ is described as new.

TODD, W. E. CLYDE. On Dysithamnus mentalis and its allies.

Bull. Amer. Mus. Nat. Hist., 35, Art. 29, Aug. 10, 1916, pp. 533–560, figs. 1–4.

Eleven species and subspecies are recognized, of which 3 are described as new.

——— Preliminary diagnoses of apparently new birds from Colombia and Bolivia.

Proc. Biol. Soc. Washington, 30, Jan. 22, 1917, pp. 3–6.

Seven species and 10 subspecies are diagnosed as new.

WETMORE, ALEXANDER. The birds of Vieques Island, Porto Rico.

Auk, 33, No. 4, Oct., 1916, pp. 403–419.

Sixty-five species, fully annotated, are recorded from the island. The material is mostly in the National Museum and Biological Survey collections.

WETMORE, ALEXANDER. The birds of Culebra Island, Porto Rico.

Auk, 34, No. 1, Jan., 1917, pp. 51–62.

An annotated list of 54 species, mostly collected by the author during his visit to the island, April, 1912.

——— A new cuckoo from New Zealand.

Proc. Biol. Soc. Washington, 30, Jan. 22, 1917, pp. 1, 2.

Urodynamis taitensis pheletes is described as new.

——— On certain secondary sexual characters in the male ruddy duck, Erismatura jamaicensis (Gmelin).

Proc. U. S. Nat. Mus., 52, No. 2191, Feb. 8, 1917, pp. 479–482, 1 fig.

Describes the tracheal air-sac and surrounding structures in the male of this species.

WETMORE, ALEXANDER—Continued.

——— An abnormal egg of Fulica americana.

Condor, 19, No. 2, Mar. 15, 1917, pp. 65, 66, fig. 24.

Describes an abnormal egg of the coot.

——— A new honey-eater from the Marianne Islands.

Proc. Biol. Soc. Washington, 30, May 23, 1917, pp. 117, 118.

Myzomela rubratra saffordi is described as new.

REPTILES AND BATRACHIANS.

ALLARD, H. A. The song of Fowler's toad (Bufo fowleri).

Science (n. s.), 44, No. 1135, Sept. 29, 1916, pp. 463, 464.

Specimens alluded to in the article are in the U. S. National Museum.

BARBOUR, THOMAS. Notes on the herpetology of the Virgin Islands.

Proc. Biol. Soc. Washington, 30, May 23, 1917, pp. 97–103.

Refers to the remnants of an extinct West Indian lizard, *Cyclura*, as being in the U. S. National Museum.

CAMP, CHARLES LEWIS. Notes on the systematic status of the toads and frogs of California.

Univ. California Pub. Zool., 17, No. 9, Feb. 3, 1917, pp. 115–125, figs. 1–3.

Based in part on examination of specimens in the U. S. National Museum.

DICKERSON, MARY C. Description of a new Amphisbaenian collected by the late Dr. Charles S. Mead in 1911, on the Isle of Pines, Cuba.

Bull. Amer. Mus. Nat. Hist., 35, Art. 34, Sept. 12, 1916, pp. 659–662, figs 1, 2.

Describes as new *Cadea palirostrata*. Paratype in the U. S. National Museum.

DUNN, EMMETT R. The salamanders of the genera Desmognathus and Leurognathus.

Proc. U. S. Nat. Mus., 53, No. 2211, June 4, 1917, pp. 393–433.

A monographic account based to a great extent on material (1,093 specimens) in the U. S. National Museum, which contains all the existing types of species of *Desmognathus*.

GAIGE, HELEN THOMPSON. Description of a new salamander from Washington.

Occ. Papers Mus. Zool., Univ. Michigan, No. 40, May 30, 1917, pp. 1–3, pl. 1.

Describes as a new species *Ranodon olympicus*, from the Olympic Mountains, Wash. Paratypes in the U. S. National Museum.

LUCAS, F. A. Occurrence of Pseudemys at Plymouth, Mass.

Copeia, No. 38, Dec. 24, 1916, pp. 98–100.

Refers to the specimen of *Pseudemys rubriventris* in the U. S. National Museum, collected by Dr. Lucas in 1905.

STEJNEGER, LEONHARD. A new lizard of the genus Sceloporus from Texas.

Proc. Biol. Soc. Washington, 29, Dec. 16, 1916, pp. 227–230.

STEJNEGER, LEONHARD—Continued.

Describes as a new species *Scleroporus disparilis*, from the extreme southern corner of Texas and northeastern Mexico.

——— A new species of horned treetoad from Panama.

Proc. Biol. Soc. Washington, 30, Feb. 21, 1917, pp. 31–33.

Describes as a new species *Cerathyla panamensis*, from north coast of Panama. The genus, which is confined to South America, is new to the fauna of the isthmus.

——— Cuban amphibians and reptiles collected for the United States National Museum from 1899 to 1902.

Proc. U. S. Nat. Mus., 53, No. 2205, May 31, 1917, pp. 259–291, figs. 1–128.

Critical remarks, with illustrations, on the extensive material received from Cuba between 1899 and 1902, embracing 45 species.

THOMPSON, JOSEPH C. The variation exhibited by Ancistrodon halys (Pallas) a pit-viper inhabiting the Far East.

Trans. San Diego Soc. Nat. Hist., 2, No. 2, 1916, pp. 61–76.

Refers to specimens of allied forms in the U. S. National Museum.

——— The variation exhibited by Thamnophis ordinoides (Baird and Girard), a garter snake inhabiting the San Francisco peninsula.

Proc. U. S. Nat. Mus., 52, No. 2179, Mar. 7, 1917, pp. 345–366.

An intensive study in variation based on a large series of individuals from a limited area. The material was presented to the National Museum by Dr. Thompson.

FISHES.

EIGENMANN, CARL H. Pimelodella and Typhlobagrus.

Memoirs Carnegie Mus., 7, No. 4, Apr., 1917, pp. 229–258, pls. 29–35.

Dr. Eigenmann monographs two closely related genera of Catfishes (Siluridae) of the fresh waters of South America, based in part upon U. S. National Museum material. Ten new forms of the genus *Pimelodella* are described. Illustrated by 17 excellent figures.

EVERMANN, BARTON WARREN, and SAMUEL F. HILDEBRAND. Notes on the fishes of east Tennessee.

Bull. Bur. Fisheries, 34, No. 832, Sept. 21, 1916, pp. 430–451, figs. 1–13.

Annotated list of 60 species common to the waters of the eastern part of Tennessee.

GILBERT, CHARLES HENRY. On the occurrence of Benthodesmus atlanticus Goode and Bean on the coast of British Columbia.

Smithsonian Misc. Colls., 66, No. 18, Feb., 1917, pp. 1, 2.

GILBERT, CHARLES HENRY—Continued.

Records a single specimen, 41½ inches long, the first record of the species in Pacific waters, belonging to the Provincial Museum of British Columbia.

——— and CARL L. HUBBS. Report on the Japanese macrouroid fishes collected by the United States Fisheries Steamer "Albatross" in 1906, with a synopsis of the genera.

Proc. U. S. Nat. Mus., 51, No. 2149, Oct. 28, 1916, pp. 135–214, pls. 8–11.

Eight species are described as new. The types are all in the National Museum.

HILDEBRAND, SAMUEL F. (See under Barton Warren Evermann and Seth E. Meek.)

HUBBS, CARL L. (See under Charles Henry Gilbert.)

MEEK, SETH E., and SAMUEL F. HILDEBRAND. The fishes of the fresh waters of Panama.

Field Mus. Nat. Hist., Pub. 191, *Zool. Ser.*, 10, No. 15, Dec. 28, 1916, pp. 215–374, pls. 6–32.

MEEK, SETH E., and SAMUEL F. HILDEBRAND—Continued.

Based on the material collected, during the Smithsonian biological survey of the Panama Canal Zone, as the result of an ichthyological reconnaissance made co-operatively by the Smithsonian Institution, Field Museum of Natural History and U. S. Bureau of Fisheries. Ninety-four species are listed and 5 genera and 13 species are described as new.

RADCLIFFE, LEWIS. Description of a new goby, Garmannia spongicola, from North Carolina.

Proc. U. S. Nat. Mus., 52, No. 2185, Feb. 8, 1917, pp. 423–425.

A small species of goby obtained during an investigation of the fishing banks on the coast of North Carolina south of Cape Hatteras.

TAYLOR, HARDEN F. The structure and growth of the scales of the Squeteague and the pigfish as indicative of life history.

Bull. Bur. Fisheries, 34, No. 823, Sept. 23, 1916, pp. 283–330, pls. 50–59.

Embodies the results of investigations directed toward explaining the various scale characters employed in the determination of their origin, constancy, bearing on life history, the methods of detecting them, and a few other observations not closely allied to the main subject. These investigations were carried on with *Cynoscion regalis* and *Orthopristis chrysopterus*, the scales of which had not hitherto been studied, in the hope that the results might broaden the knowledge of scales, by corroborating, modifying or contradicting present theories.

MOLLUSKS.

BARTSCH, PAUL. A new Teredo from the west coast of America.

Nautilus, 30, No. 4, Aug., 1916, pp. 47, 48.

Notes the discovery of a new species, *Teredo diegiensis*, from San Diego, Cal., the type and other specimens of which are in the U. S. National Museum.

——— A new landshell from Brazil.

Nautilus, 30, No. 5, Sept., 1916, pp. 53, 54.

Describes *Oxychona pyramidella currani* from the Rio Grungugy, Bahia. The type is in the U. S. National Museum.

——— Melanella iotoides a new name for Melanella iota Bartsch.

Nautilus, 30, No. 6, Oct., 1916, p. 72.

The type is in the U. S. National Museum.

——— Two new land shells from the western states.

Proc. U. S. Nat. Mus., 51, No. 2155, Nov. 24, 1916, pp. 331–333, pl. 31.

Describes 2 new subspecies of *Orcohelix*, 1 collected in Montana by Mrs. Charles D. Walcott, the other in Idaho by Mr. Vernon Bailey, *O. yavapai mariae* and *O. idahoensis baileyi*. The types and paratypes are in the U. S. National Museum.

BARTSCH, PAUL—Continued.

——— Eulimastoma, a new subgenus of Pyramidellids and remarks on the genus Scalenostoma.

Nautilus, 30, No. 7, Nov., 1916, pp. 73, 74.

Creates a new Pyramidellid subgenus, *Eulimastoma*, with *Odostomia* (*Scalenostoma*) *dotella* Dall and Bartsch as type and refers the genus *Scalenostoma* to the family Melanellidae.

——— The Californian land shells of the Epiphragmophora traskii group.

Proc. U. S. Nat. Mus., 51, No. 2170, Dec. 21, 1916, pp. 609–619, pls. 114–117.

Critical analysis of the Californian land shells of the *Epiphragmophora traskii* group, with descriptions of 8 new subspecies. The types of 5 are in the U. S. National Museum and 3 in the Academy of Natural Sciences of Philadelphia.

BARTSCH, PAUL. The Missouri River as a faunal barrier.

Nautilus, 30, No. 8, Dec., 1916, p. 92.

Brief note calling attention to the fact that during the Mississippi Valley pearl mussel inquiry it was found that the enormous amount of sediment carried by the Missouri River formed an effectual barrier to the distribution of the Union, idae and other aquatic animals.

——— Report on the Bahama Cerions planted on the Florida Keys.

Carnegie Inst. of Washington, Year Book No. 15, 1916, pp. 179–182.

Abstract of report on breeding experiments with Cerions.

——— Report on the colony of the Florida tree snails transplanted from Miami to the Tortugas and Key West.

Carnegie Inst. of Washington, Year Book No. 15, 1916, p. 182.

Records last year's effort to introduce *Liguus fasciatus* on the Tortugas a failure.

——— The status of the genus Subularia Monterosato.

Nautilus, 30, No. 12, Apr., 1917, pp. 133, 134, figs. 1, 2 on pl. 5.

Discussion of the status of the genus *Subularia* Monterosato with the following conclusion: *Subularia* Monts. 1884, type *S. metcalfei* (A. Ads.) equals *Leiostraca* H. & A. Adams 1853, type *L. metcalfei* A. Ads.; not *Leiostracus* Albers 1850.

——— Descriptions of new West American marine mollusks and notes on previously described forms.

Proc. U. S. Nat. Mus., 52, No. 2193, May 29, 1917, pp. 637–681, pls. 42–47.

Describes and figures new species of West American mollusks belonging to groups previously monographed by the author, and gives additional data on forms already described, with especial reference to nuclear characters. In addition to describing 1 new genus and 52 new species, *Odostomia (Evalea) andersoni* is proposed as a new name for *Eulimella californica* Anderson and Martin, not *Odostomia (Evalea) californica* Dall and Bartsch. The types and additional material on which this paper is based are in the U. S. National Museum.

DALL, WILLIAM HEALEY. Checklist of the recent bivalve mollusks (Pelecypoda) of the northwest coast of America from the Polar Sea to San Diego, California.

Southwest Museum, Los Angeles, Cal., 8, July, 1916, pp. 1–44, portrait.

Enumerates about 474 species and varieties of which 86 are new to the fauna, the latter being mostly new species. The material from which the list was prepared is almost entirely comprised in the National Museum collections.

——— Notes on the West American Columbellidae.

Nautilus, 30, No. 3, July, 1916, pp. 25–29.

A review of the west coast species in the collection of the National Museum. *Parametaria* is proposed for *Meta* preoccupied by Koch; *Columbella lucasana* Dall for *C. festiva* Kiener not De Laborde; *C. parva* Sby., not H. C. Lea, takes the name of *C. milium*; *C. minima* Arnold not Tenison Woods, takes *arnoldi*; *C. varicgata* Stearns not Menke, takes the name *hypodra*; *Aesopus myrmecoon* is described as new; *Buccinum corrugatum* Reeve, 1846, not of Brocchi, 1814, belongs to the genus *Amphissa* and is renamed *columbiana*. The varieties of *Amphissa versicolor* Dall, are described,—*cymata*, *incisa* and *reticulata* Dall, and *lineata* Stearns. *Columbella* (now *Strombina*) *fusiformis* Hinds not Anton, takes the name of *fusinoidea*; *C. subulata* Sowerby not Duclos, the name of *colpoica*; *Strombina paccana* and *S. Hlacina* from the Gulf of California are described as new.

DALL, WILLIAM HEALEY. On the distribution of Pacific invertebrates.

Proc. Nat. Acad. Sci., 2, No. 7, July, 1916, p. 424.

——— Shells of Mt. Monadnock, N. H.

Nautilus, 30, No. 5, Sept., 1916, pp. 57, 58.

Twelve species enumerated, all of which are in the U. S. National Museum.

——— Diagnoses of new species of marine bivalve mollusks from the northwest coast of America in the collection of the United States National Museum.

Proc. U. S. Nat. Mus., 52, No. 2183, Dec., 1916, pp. 393–417.

A large number of new species and varieties are described. A new section of the genus *Lithophaga* is defined under the name of *Labis* for *L. attenuata* Deshayes, and *Macama brota* is proposed as a new name for *edentula* Broderip and Sowerby, not of Spengler. The types and additional material are in the U. S. National Museum.

——— On some anomalies in geographic distribution of Pacific Coast mollusca.

Proc. Nat. Acad. Sci., 2, No. 12, Dec., 1916, pp. 700–703.

The material on which this paper is based is largely in the U. S. National Museum.

——— Summary of the mollusks of the family Alectrionidae of the west coast of America.

Proc. U. S. Nat. Mus., 51, No. 2166, Jan. 15, 1917, pp. 575–579.

A review based on material in the U. S. National Museum. Twelve new forms are named.

——— New Bulimulus from the Galapagos Islands and Peru.

Proc. Biol. Soc. Washington, 30, Jan. 22, 1917, pp. 9–12.

The new forms are *Bulimulus (Naesiotus) saeronius*, *B. (N.) trogonius*, and *B. (Scutalus ?) spurimacensis*. The types are in the U. S. National Museum.

DALL, WILLIAM HEALEY. Atlantic slope Arcas, by Pearl G. Sheldon.

Amer. Journ. Sci., 4th Ser., 43, No. 255, Mar., 1917, p. 251.

Review of a paper on the Tertiary and recent species of the genus *Arca* from the Atlantic slope published in the first number of Palaeontographica Americana.

HENDERSON, JOHN B. A list of the land and fresh-water shells of the Isle of Pines.

Annals Carnegie Mus., 10, Nos. 3 and 4, art. 13, July 1, 1916, pp. 315–324.

A list of species with annotations.

——— A new Cuban Zachrysia.

Nautilus, 30, No. 5, Sept., 1916, p. 49, pl. 1.

Describes a new species, the first carinated *Zachrysia* yet observed in the Mayari hills of Oriente Province, Cuba, *Picurodonte (Zachrysia) torrei*. The type and additional specimens are in Mr. Henderson's collection.

PILSBRY, HENRY A. Manual of conchology, structural and systematic. Part 93—Pupillidæ.

Conchological Dept., Acad. Nat. Sci. Phila., 2nd Ser., pt. 93, pp. 1–112, pls. 1–13.

This paper forms part 93 of the Manual of Conchology, founded by George W. Tryon, jr., and continued by the author, and presents a critical diagnosis of the *Gastrocopta*. Five new species and 7 subspecies are described, of which 2 types are in the U. S. National Museum. *Gastrocopta quadridens* Pilsbry is a new name proposed for *G. quadridentata* Pilsbry.

STERKI, VICTOR. A new mollusk of the genus Pisidium from Alaska, with field notes by G. Dallas Hanna.

Proc. U. S. Nat. Mus., 51, No. 2160, Dec. 16, 1916, pp. 475–477, figs. 1, 2.

Notes on the habits and life history of the Pisidiums of the Pribilof Islands with description of the new species *P. hannai*. The type and additional specimens are in the U. S. National Museum.

INSECTS.

ALDRICH, J. M. Sarcophaga and allies in North America.

The Thomas Say Foundation, Ent. Soc. Amer., Nov. 30, 1916, pp. 1–301, pls. 1–16.

Describes 9 new genera. Of the new forms described, 7 of the paratypes and the types of 90 of the species are in the U. S. National Museum.

ANDREWS, HAZEL. (See under T. D. A. Cockerell.)

BAKER, A. C. A synopsis of the genus Calaphis.

Proc. Ent. Soc. Washington, 18, No. 3, Nov. 27, 1916, pp. 184–189.

Gives a key to North American species and describes 2 new species.

——— (See also under A. L. Quaintance.)

BANKS, NATHAN. Report on Arachnida collected by Messrs. Currie, Caudell, and Dyar in British Columbia.

Proc. U. S. Nat. Mus., 51, No. 2143, Oct. 16, 1916, pp. 67–72.

BARBER, H. S. A review of North American tortoise beetles.

Proc. Ent. Soc. Washington, 18, No 2, Aug. 4, 1916, pp. 113–127, pl. 5.

Includes a key to the species under consideration.

——— A new species of weevil injuring orchids.

Proc. Ent. Soc. Washington, 18, No. 3, Nov. 27, 1916, pp. 177–179, pl. 13.

BERGROTH, E. New and little-known heteropterous Hemiptera in the United States National Museum.

Proc. U. S. Nat. Mus., 51, No. 2150, Oct. 28, 1916, pp. 215–230.

Describes 4 new genera and 16 new species.

BÖVING, ADAM. A generic synopsis of the coccinellid larvae in the United States National Museum, with a description of the larva of Hyperaspis binotata Say.

Proc. U. S. Nat. Mus., 51, No. 2171, Jan. 15, 1917, pp. 621–650, pls. 118–121.

BUSCK, AUGUST. Descriptions of new North American Microlepidoptera.

Proc. Ent. Soc. Washington, 18, No. 3, Nov. 27, 1916, pp. 147–154.

Describes 1 new genus and 15 new species.

CAUDELL, A. N. Some interesting Orthoptera from Mexico.

Insecutor Inscitiæ Menstruus, 5, Nos. 1–3, Apr. 6, 1917, pp. 28, 29.

Gives notes on 3 species.

COCKERELL, T. D. A. Some Euglossine bees.

Can. Ent., 49, No. 4, Apr. 7, 1917, pp. 144–146.

Describes 2 new species and 2 new varieties, with notes on other species.

——— and HAZEL ANDREWS. Some Diptera (Microdon) from nests of ants.

Proc. U. S. Nat. Mus., 51, No. 2141, Oct. 16, 1916, pp. 53–56, figs. 1, 2.

Describes 1 new species.

CRAIGHEAD, F. C. The determination of the abdominal and thoracic areas of the Cerambycid larvae as based on a study of the muscles.

Proc. Ent. Soc. Washington, 18, No. 3, Nov. 27, 1916, pp. 129–146, pls. 6–9.

CRAWFORD, J. C. Some American Hymenoptera.

Proc. Ent. Soc. Washington, 18, No. 2, Aug. 4, 1916, pp. 127, 128.

Describes 2 new species.

CRAWFORD, J. C. Nine new species of Hymenoptera.

Insecutor Inscitiæ Menstruus, 4, Nos. 7–9, Oct. 23, 1916, pp. 101–107, 1 fig.

——— Some new American Hymenoptera.

Insecutor Inscitiæ Menstruus, 4, Nos. 10–12, Jan. 12, 1917, pp. 135–144.

One new genus, 8 new species and 1 new variety are described; and the North American species of the genus *Ptinobius* are tabulated and a table of the genera allied to *Phileremus* is given.

CURRIE, BERTHA P. Gomphus parvidens, a new species of dragonfly from Maryland.

Proc. U. S. Nat. Mus., 53, No. 2199, June 1, 1917, pp. 223–226, pls. 27, 28.

DYAR, HARRISON G. Mosquitoes at San Diego, California.

Insecutor Inscitiæ Menstruus, 4, Nos. 4–6, July 18, 1916, pp. 46–51.

Notes on the species found at that locality.

——— Descriptions of new Lepidoptera from Mexico.

Proc. U. S. Nat. Mus., 51, No. 2139, Oct. 16, 1916, pp. 1–37.

Describes 7 new genera, 111 new species and 3 new subspecies.

——— New Aëdes from the mountains of California.

Insecutor Inscitiæ Menstruus, 4, Nos. 7–9, Oct. 23, 1916, pp. 80–90.

Six new species are described.

——— A note on Cisthene.

Insecutor Inscitiæ Menstruus, 5, Nos. 1–3, Apr. 6, 1917, pp. 8–10.

Tabulates the species of the genus and describes 4 new species.

DYAR, HARRISON G. The mosquitoes of the mountains of California.

Insecutor Inscitiæ Menstruus, 5, Nos. 1–3, Apr. 6, 1917, pp. 11–21.

Gives notes on the species found by the author and describes 1 new one.

——— The Barnes & McDunnough "List."

Insecutor Inscitiæ Menstruus, 5, Nos. 1–3, Apr. 6, 1917, pp. 41–44.

Contains notes on the synonymy of various species.

——— Three new North American Phycitinæ.

Insecutor Inscitiæ Menstruus, 5, Nos. 1–3, Apr. 6, 1917, pp. 45, 46.

——— A new Phycitid from the Bahamas.

Insecutor Inscitiæ Menstruus, 5, Nos. 1–3, Apr. 6, 1917, pp. 46, 47.

One new genus and species are described.

——— A new Noctuid from Brazil.

Insecutor Inscitiæ Menstruus, 5, Nos. 1–3, Apr. 6, 1917, pp. 50, 51.

Describes 1 new genus and species.

——— Miscellaneous new American Lepidoptera.

Insecutor Inscitiæ Menstruus, 5, Nos. 4–6, June 2, 1917, pp. 65–69.

One new genus, 7 new species and 1 new variety are described.

——— Notes on North American Pyraustinæ.

Insecutor Inscitiæ Menstruus, 5, Nos. 4–6, June 2, 1917, pp. 69–75.

Describes 4 new species and 3 new varieties, with notes on the synonymy of various other species.

DYAR, HARRISON G. Notes on North American Nymphulinæ.

Insecutor Inscitiæ Menstruus, 5, Nos. 4–6, June 2, 1917, pp. 75–79.

Seven new species are described.

——— Notes on North American Schœnobiinæ.

Insecutor Inscitiæ Menstruus, 5, Nos. 4–6, June 2, 1917, pp. 79–84.

One new genus, 9 new species and 1 new form are described.

——— Seven new Crambids from the United States.

Insecutor Inscitiæ Menstruus, 5, Nos. 4–6, June 2, 1917, pp. 84–87.

——— Seven new Pyralids from British Guiana.

Insecutor Inscitiæ Menstruus, 5, Nos. 4–6, June 2, 1917, pp. 88–92.

——— (See also under Leland O. Howard.)

——— and FREDERICK KNAB. Eggs and oviposition in certain species of Mansonia.

Insecutor Inscitiæ Menstruus, 4, Nos. 4–6, July 18, 1916, pp. 61–68, figs. 1, 2 and 2a.

Includes also description of 1 new species.

——— ——— Bromelicolous Anopheles.

Insecutor Inscitiæ Menstruus, 5, Nos. 1–3, Apr. 6, 1917, pp. 38–40.

Gives a table of the species involved and describes 1 new species.

FAGAN, MARGARET M. (See under S. A. Rohwer.)

FISHER, W. S. A new species of Xylotrechus.

Proc. Ent. Soc. Washington, 18, No. 4, June 11, 1917, pp. 214–216.

FOX, HENRY. Field notes on Virginia Orthoptera.

Proc. U. S. Nat. Mus., 52, No. 2176, Mar. 16, 1917, pp. 199–234.

GAHAN, A. B. Description of a Braconid parasite of Polydrusus impressifrons.

New York Agr. Exp. Sta., Tech. Bull. No. 56, Dec., 1916, pp. 23, 24, fig. 6.

——— Descriptions of some new parasitic Hymenoptera.

Proc. U. S. Nat. Mus., 53, No. 2197, May 26, 1917, pp. 195–217.

Describes 2 new genera and 26 new species.

GIBSON, EDMUND H. Three new species of Jassoidea from Missouri.

Can. Ent., 49, No. 5, May 1, 1917, pp. 183, 184.

——— Two new species of Dicyphus from Porto Rico (Miridae, Heteroptera).

Can. Ent., 49, No. 6, June 2, 1917, pp. 218, 219.

——— A new species of Corythuca from the Northwest (Heterop., Tingitidae).

Ent. News, 28, No. 6, June, 1917, p. 258.

——— Key to the species of Leptoglossus Guer. occurring north of Mexico (Heteroptera; Coreidæ).

Psyche, 24, No. 3, June, 1917, pp. 69–73.

GIRAULT, A. A. Descriptions of and observations on some chalcidoid Hymenoptera.

Can. Ent., 48, No. 7, July 12, 1916, pp. 242–246, I; 8, Aug. 15, 1916, pp. 265–268, II; 10, Oct. 13, 1916, pp. 337–344, II.

(First) Five new species and 2 new varieties are described. (Second) Two new species and 1 new genus are described and the North American species of

GIRAULT, A. A.—Continued.

the *Euplectrus* are tabulated. (Second Bis) Nine new species are described.

——— A new genus of Pteromalid chalcidoid Hymenoptera from North America.

Can. Ent., 48, No. 7, July 12, 1916, pp. 246–248.
One new species described.

——— A new genus of lelapine chalcid flies from the United States.

Can. Ent., 48, No. 8, Aug. 15, 1916, pp. 263, 264.
Includes description of 1 new species.

——— A new genus of Scelionidæ from the West Indies.

The Entomologist, 49, Sept., 1916, pp. 198, 199.
Includes description of 1 new species.

——— A new genus of Ophioneurine Tricho-grammatidæ from Java.

The Entomologist, 49, Sept., 1916, pp. 199, 200.
Includes description of 1 new species.

——— New miscellaneous chalcidoid Hymenoptera with notes on described species.

Annals Ent. Soc. Amer., 9, Sept., 1916, pp. 291–308.
Describes 4 new genera and 22 new species.

——— A remarkable new genus of Encyrtidæ from the West Indies, bearing two ring-joints.

Journ. N. Y. Ent. Soc., 24, No. 3, Sept., 1916, pp. 232, 233.
Includes description of 1 new species.

——— Three new chalcid flies from California.

Pomona Journ. of Ent. and Zool., 8, No. 3, Sept., 1916, pp. 119–122.

GIRAULT, A. A. The occurrence of the genus Achrysocharelloidea Girault in North America.

Can. Ent., 48, No. 10, Oct. 13, 1916, p. 336.
Describes 1 new species.

——— Descriptions of miscellaneous North American chalcidoid Hymenoptera of the family Eulophidae.

Proc. U. S. Nat. Mus., 51, No. 2140, Oct. 16, 1916, pp. 39–52.
Describes 3 new genera, 20 new species and 2 new varieties.

——— New North American Hymenoptera of the family Eulophidae.

Proc. U. S. Nat. Mus., 51, No. 2148, Oct. 28, 1916, pp. 125–133.
Describes 2 new genera and 11 new species.

——— A new miscogasterid chalcid fly from Maryland.

Bull. Brooklyn Ent. Soc., 11, No. 4, Oct., 1916, pp. 87, 88.

——— Pirene marylandensis n. sp. (chalcidoid Hymenoptera).

Bull. Brooklyn Ent. Soc., 11, No. 4, Oct., 1916, p. 88.

——— A new genus of Tetrastichini (chalcidoid Hymenoptera).

Ent. News, 27, No. 8, Oct., 1916, p. 348.

——— A new genus of omphaline Eulophidae from North America (Hymenoptera).

The Entomologist, 49, Nov., 1916, pp. 249, 250.
Describes 1 new species.

——— Descriptiones Hymenopterorum Chalcidoidicorum Variorum cum Observationibus. 11.

Ent. News, 27, Nov., 1916, pp. 401–405.
Describes 5 new species.

——— New Javanese chalcidoid Hymenoptera.

Proc. U. S. Nat. Mus., 51, No. 2161, Dec. 16, 1916, pp. 479–485.
Describes 2 new genera, 10 new species and 1 new variety.

GIRAULT, A. A. The North American species of Dibrachys (in the North American sense—Cœlopisthoidea Gahan) with a note on Uriella Ashmead.

Can. Ent., 48, Dec. 23, 1916, pp. 408, 409.
Gives a key to the North American species.

——— The occurrence of Neoderostenus Girault in North America (Hymenoptera).

Can. Ent., 48, Dec. 23, 1916, p. 409.
Describes 1 new species.

——— A new genus of omphaline eulaphid chalcid-flies from Maryland.

Can. Ent., 48, No. 12, Dec. 23, 1916, p. 410.
Describes 1 new species.

——— New species of parasitic Hymenoptera.

Bull. Brooklyn Ent. Soc., 11, No. 5, Dec., 1916, pp. 111–113.
Describes 6 new species.

——— Descriptions of miscellaneous chalcid-flies.

Insecutor Inscitiæ Menstruus, 4, Nos. 10–12, Jan. 12, 1917, pp. 109–121.
Describes 20 new species.

——— New chalcid flies from Maryland (Hym.).

Ent. News, 28, Jan., 1917, pp. 20–23.
Describes 2 new genera and 6 new species.

——— Descriptiones Hymenopterorum Chalcidoidicorum cum Observationibus. IV.

The Entomologist, 50, Feb., 1917, pp. 36–38.
Three new species are described.

——— Two new genera of North America Entedoninae (chalcid-flies).

Can. Ent., 49, March 10, 1917, pp. 110, 111.

GIRAULT, A. A. Speciosissima Genera Nova Eulophidorum.

Privately published, Washington, D. C., Mar. 10, 1917.
Seven new genera and 3 new species are described.

——— New Javanese Hymenoptera.

Privately published, Washington, D. C., Mar. 28, 1917.
Describes 5 new genera, 23 new species and 1 new subspecies.

——— New chalcid flies.

Privately published, Hillmead Press, Glenn Dale, Md., Mar. 30, 1917.
Describes 4 new genera and 22 new species and proposes 1 new name.

——— New Eulophidae.

Privately published, Hillmead Press, Glenn Dale, Md., Mar. 30, 1917.
Two new species are described.

——— Two new Achrysocharellae.

Privately published, Hillmead Press, Glenn Dale, Md., Mar. 30, 1917.

——— Notes on chalcid flies, chiefly from California.

Journ. Ent. and Zool., 9, No. 1, Mar., 1917, pp. 8–12.
Seven new species are described and the North American species of the genus *Eusandalum* are tabulated.

——— The occurrence of the genus Monobaeus Foerster in North America (Hym.).

Ent. News, 28, No. 3, Mar., 1917, p. 106.
Describes 1 new species.

——— A chalcid parasite of the pink boll worm.

Insecutor Inscitiæ Menstruus, 5, Nos. 1–3, Apr. 6, 1917, pp. 5, 6.
Describes 1 new species.

GIRAULT, A. A. Some new Australian chalcid flies, mostly of the family Encyrtidæ.

Insecutor Inscitiæ Menstruus, 5, Nos. 1–3, Apr. 6, 1917, pp. 29–37.

Describes 12 new species and 1 new variety, and gives new name for one preoccupied, together with notes on and synonymy of various other species and genera.

——— The occurrence of the genus Parachrysocharis Girault in the United States.

Can. Ent., 49, No. 4, Apr. 7, 1917, p. 129.

Describes 1 new species.

——— The North American species of Euchrysia. Females.

Bull. Brooklyn Ent. Soc., 12, No. 1, Apr., 1917, p. 14.

Gives a table of species and describes 1 new species.

——— The North American species of Habrocytus (chalcid-flies).

Can. Ent., 49, No. 5, May 1, 1917, pp. 178–182.

Gives a table of species and describes 6 new species and 1 new variety.

——— Descriptiones Stellarum Novarum.

Privately published, Washington, D. C., May 1, 1917.

Describes 2 new genera, 50 new species and 4 new varieties, and proposes 3 new names.

——— Descriptiones Hymenopterorum Chalcidoidicorum Variorum cum Observationibus. III.

Privately published, Hillmead Press, Glenn Dale, Md., May 3, 1917.

Five new genera, and 35 new species described.

——— New Australian chalcid-flies.

Insecutor Inscitiæ Menstruus, 5, Nos. 4–6, June 2, 1917, pp. 92–96.

One new genus and 6 new species are described.

GIRAULT, A. A. The North American species of Pachyneuron with three new species (chalcid flies).

Psyche, 24, No. 3, June, 1917, pp. 88–90.

——— New miscellaneous chalcid-flies from North America.

Psyche, 24, No. 3, June, 1917, pp. 91–99.

Fourteen new species and 1 new variety are described.

——— A new species of the genus Mymar from the woods of Maryland with an important descriptive note.

Psyche, 24, No. 3, June, 1917, pp. 99, 100.

——— A metallic species of Cirrospilopsis from Maryland (Hymenoptera Eulophidæ).

Psyche, 24, No. 3, June, 1917, p. 100.

——— A new species of Closterocerus from California (Hymenoptera Eulophidæ).

Psyche, 24, No. 3, June, 1917, p. 101.

——— A new genus or subgenus of pachyneurine chalcid-flies.

Psyche, 24, No. 3, June, 1917, p. 102.

HEIDEMANN, OTTO. Two new species of lace-bugs.

Proc. Ent. Soc. Washington, 18, No. 4, June 11, 1917, pp. 217–219.

HEINRICH, CARL. On the taxonomic value of some larval characters in the Lepidoptera.

Proc. Ent. Soc. Washington, 18, No. 3, Nov. 27, 1916, pp. 154–164, pl. 10, figs. 1, 2.

——— Generic description of larva of Anegcephalesis Dyar.

Insecutor Inscitiæ Menstruus, 5, Nos. 1–3, Apr. 6, 1917, pp. 48–51, 1 pl.

HOWARD, LELAND O. A curious formation of a fungus occurring on a fly.

Proc. Ent. Soc. Washington, 18, No. 3, Nov. 27, 1916, pp. 196, 197.

HOWARD, LELAND O., HARRISON G. DYAR, and FREDERICK KNAB. The mosquitoes of North and Central America and the West Indies.

Carnegie Inst. of Washington, Pub. No. 159, Vol. 2, Mar. 31, 1917, pp. 525–1064.

This volume, which is Part II of the Systematic Treatment and completes the work, contains the descriptions of 6 new species. In this volume the remainder of the culicine mosquitoes and the megarhinine and anopheline mosquitoes are treated.

KENNEDY, CLARENCE HAMILTON. Notes on the life history and ecology of the dragonflies (Odonata) of central California and Nevada.

Proc. U. S. Nat. Mus., 52, No. 2192, May 12, 1917, pp. 483–635, figs. 1–404.

Three new genera, 3 new species and 3 new subspecies are described.

KNAB, FREDERICK. The earliest name of the yellow fever mosquito.

Insecutor Inscitiæ Menstruus, 4, Nos. 4–6, July 18, 1916, pp. 59, 60.

Shows that the correct name is *Aëdes argenteus* instead of *A. calopus*.

——— A new mosquito from the eastern United States.

Proc. Biol. Soc. Washington, 29, Sept. 6, 1916, pp. 161–163.

——— Critical notes on Syrphidæ.

Insecutor Inscitiæ Menstruus, 4, Nos. 7–9, Oct. 23, 1916, pp. 91–95.

Includes a description of 1 new species.

——— What is Tabanus mexicanus?

Insecutor Inscitiæ Menstruus, 4, Nos. 7–9, Oct. 23, 1916, pp. 95–100, figs. 1, 2.

Gives notes on and synonymy of several species of the genus.

——— Egg-disposal in Dermatobia hominis.

Proc. Ent. Soc. Washington, 18, No. 3, Nov. 27, 1916, pp. 179–182.

KNAB, FREDERICK—Continued.

Gives an account of the habit of this fly placing its eggs on mosquitoes instead of laying them directly on the host.

——— Further notes on Syrphidæ.

Insecutor Inscitiæ Menstruus, 4, Nos. 10–12, Jan. 12, 1917, pp. 133–135.

Notes on several species.

——— (See also under Harrison G. Dyar and Leland O. Howard.)

MORRISON, HAROLD. Monograph of the nearctic Hymenoptera of the genus Bracon Fabricius.

Proc. U. S. Nat. Mus., 52, No. 2178, Mar. 7, 1917, pp. 305–343, pls. 24–27.

Describes 9 new species.

MYERS, P. R. An American species of the hymenopterous genus Wesmaelia of Foerster.

Proc. U. S. Nat. Mus., 53, No. 2206, May 24, 1917, pp. 293, 294.

——— A new American parasite of the Hessian fly (Mayetiola destructor Say).

Proc. U. S. Nat. Mus., 53, No. 2204, May 28, 1917, pp. 255–257.

PAINE, JOHN HOWARD. An asymmetrical bird-louse found on three different species of troupials.

Proc. U. S. Nat. Mus., 53, No. 2201, June 1, 1917, pp. 231, 232, pl. 32.

PARKER, JOHN BERNARD. A revision of the bembicine wasps of America north of Mexico.

Proc. U. S. Nat. Mus., 52, No. 2173, Feb. 10, 1917, pp. 1–155, figs. 1–230.

Based in part on the collections of the U. S. National Museum. One new genus and 21 new species are described. The types of 12 species, the allotype of 1 and the paratypes of 2 other species are in the National Museum.

PIERCE, W. DWIGHT. Studies of weevils (Rhynchophora) with descriptions of new genera and species.

Proc. U. S. Nat. Mus., 51, No. 2159, Dec. 16, 1916, pp. 461–473, figs. 1, 2.

Describes 1 new genus and 2 new species.

QUAINTANCE, A. L., and A. C. BAKER. A contribution to our knowledge of the white flies of the subfamily Aleyrodinae (Aleyrodidae).

Proc. U. S. Nat. Mus., 51, No. 2156, Jan. 20, 1917, pp. 335–445, pls. 32–77, figs. 1–10.

Gives key to the species of the genera included in this subfamily and describes 10 new subgenera and 36 new species.

ROHWER, S. A. A new bee of the genus Dianthidium.

Proc. Ent. Soc. Washington, 18, No. 3, Nov. 27, 1916, pp. 192, 193.

——— Two bethylid parasites of the pink boll worm.

Insecutor Inscitiæ Menstruus, 5, Nos. 1–3, Apr. 6, 1917, pp. 1–3.

Describes 1 new species.

——— A report on a collection of Hymenoptera (mostly from California) made by W. M. Giffard.

Proc. U. S. Nat. Mus., 53, No. 2202, May 28, 1917, pp. 233–249.

Describes 15 new species.

——— Descriptions of thirty-one new species of Hymenoptera.

Proc. U. S. Nat. Mus., 53, No. 2195, June 5, 1917, pp. 151–176, 1 fig.

——— A nearctic species of Dolichurus.

Proc. Ent. Soc. Washington, 18, No. 4, June 11, 1917, pp. 212, 213.

ROHWER, S. A. Diprion simile in North America.

Proc. Ent. Soc. Washington, 18, No. 4, June 11, 1917, pp. 213, 214.

——— and MARGARET M. FAGAN. The type-species of the genera of the Cynipoidea, or the gall wasps and parasitic cynipoids.

Proc. U. S. Nat. Mus., 53, No. 2208, June 6, 1917, pp. 357–380.

SCHWARZ, E. A. Ants protecting acacia trees in Central America.

Proc. Ent. Soc. Washington, 18, No. 4, June 11, 1917, p. 211.

——— Rhizobius not Rhyzobius.

Proc. Ent. Soc. Washington, 18, No. 4, June 11, 1917, p. 214.

Points out that *Rhizobius* is the correct spelling of this generic name.

SHANNON, R. C. Two new North American Diptera.

Insecutor Inscitiæ Menstruus, 4, Nos. 4–6, July 18, 1916, pp. 69–72, 1 fig.

——— Notes on some genera of Syrphidae with descriptions of new species.

Proc. Ent. Soc. Washington, 18, No. 2, Aug. 4, 1916, pp. 101–113.

Gives keys to the North American species of the genera *Chrysogaster* and *Caliprobola* and describes 9 new species.

SMITH, HARRISON E. New Tachinidae from North America.

Proc. Ent. Soc. Washington, 18, No. 2, Aug. 4, 1916, pp. 94–98.

One new genus and 5 new species are described.

TOWNSEND, CHARLES H. T. On Australian Muscoidea, with description of new forms.

Insecutor Inscitiæ Menstruus, 4, Nos. 4–6, July 18, 1916, pp. 44, 45.

Three new genera and 1 new species are described.

——— Muscoid flies from the southern United States.

Insecutor Inscitiæ Menstruus, 4, Nos. 4–6, July 18, 1916, pp. 51–59.

Gives detail description of various species of which formerly only the early stage or reproductive characters had been published.

——— Note on Myiophasia aenea Wd.

Proc. Ent. Soc. Washington, 18, No. 2, Aug. 4, 1916, pp. 100, 101.

——— Some new North American muscoid forms.

Insecutor Inscitiæ Menstruus, 4, Nos. 7–9, Oct. 23, 1916, pp. 73–78.

Six new genera and 3 new species are described.

——— New genera and species of muscoid flies.

Proc. U. S. Nat. Mus., 51, No. 2152, Oct. 28, 1916, pp. 299–323.

Describes 28 new genera and 27 new species.

TOWNSEND, CHARLES H. T. Miscellaneous muscoid notes and descriptions.

Insecutor Inscitiæ Menstruus, 4, Nos. 10–12, Jan. 12, 1917, pp. 121–128.

Seven new genera and 6 new species are described.

——— Second paper on Brazilian Muscoidea collected by Herbert H. Smith.

Bull. Amer. Mus. Nat. Hist., 37, Art. 6, Mar. 24, 1917, pp. 221–233.

Paratypes of 6 of the new species and of 4 of the new subspecies have been deposited in the U. S. National Museum.

——— New genera and species of American muscoid Diptera.

Proc. Biol. Soc. Washington, 30, Mar. 31, 1917, pp. 43–50.

Thirteen new genera and 4 new species are described, and 2 new names are proposed.

——— A synoptic revision of the Cuterebridæ with synonymic notes and the description of one new species.

Insecutor Inscitiæ Menstruus, 5, Nos. 1–3, Apr. 6, 1917, pp. 23–28.

Gives a table to the subfamily and genera and to the species of the genera *Cuterebra* and *Bogeria*.

WALTON, W. R. The tachinid genus Argyrophylax B. & B.

Proc. Ent. Soc. Washington, 18, No. 3, Nov. 27, 1916, pp. 189–192, pl. 14.

ARACHNIDS.

MCGREGOR, E. A. Descriptions of seven new species of red spiders.

Proc. U. S. Nat. Mus., 51, No. 2167, Jan. 15, 1917, pp. 581–590, pls. 101–107.

TARDIGRADES.

HAY, W. P. A new species of bear-animalcule from the coast of North Carolina.

Proc. U. S. Nat. Mus., 53, No. 2203, June 1, 1917, pp. 251–254, pl. 33.

Reports the first finding of marine tardigrades on the American Atlantic coast, and describes and figures as new 1 species, *Batillipes caudatus*, the types of which are in the U. S. National Museum.

CRUSTACEANS.

HAY, W. P. A new genus and three new species of parasitic isopod crustaceans.

Proc. U. S. Nat. Mus., 51, No. 2165, Jan. 15, 1917, pp. 569–574, pls. 98–100.

Describes 1 new genus and 3 new species of Bopyrid Isopoda: *Phryxus subcaudalis*, *Synaynella*, *S. deformans*, and *Pseudione upogebiae*, the types of which are in the U. S. National Museum.

PILSBRY, HENRY A. The sessile barnacles (Cirripedia) contained in the collections of the U. S. National Museum; including a monograph of the American species.

Bull. U. S. Nat. Mus., No. 93, July 31, 1916, pp. 1–366, pls. 1–76, figs. 1–99.

Continuation of the author's report on the Cirripedia in the collections of the U. S. National Museum, of which the part relating to the pedunculate forms was published in 1907. A critical study of the American forms, with records of the foreign species represented in the Museum interpolated in systematic order. Where extended investigations of Old World barnacles were essential to a proper understanding of our own the results have been included. Nearly all the deep-water species of the American coast proved to be new to science, but a majority of the littoral species have been described by Darwin. The latter are here given a fuller diagnosis with especial reference to important features found in the cirri. Various reforms in classification have been introduced. Moreover, the vast collections from American waters have extended our knowledge of the geographic and bathymetric distribution of the species. In order to complete the account of American forms some material from the collection of the Academy of Natural Sciences of Philadelphia and a series of Antillean deep-water forms from the collections of the Museum of Comparative Zoology were utilized. One new genus, 5 new subgenera, 23 new species and 30 new subspecies are described as new, the type-specimens of all but 9 being in the National Museum.

PILSBRY, HENRY A.—Continued.

SHOEMAKER, C. R. Descriptions of three new species of amphipods from southern California.

Proc. Biol. Soc. Washington, 29, Sept. 6, 1916, pp. 157–160.

Describes the following from Venice, Cal.: *Aruga macromerus*, *Ampelisca venetiensis*, *Podoceropsis concava*. The types are in the U. S. National Museum.

WILSON, CHARLES BRANCH. North American parasitic copepods belonging to the Lernaeidae with a revision of the entire family.

Proc. U. S. Nat. Mus., 53, No. 2194, June 13, 1917, pp. 1–150, pls. 1–21.

The author's thirteenth paper in the series dealing with the parasitic copepods in the collections of the U. S. National Museum; presents a critical analysis of the family Lernaeidae. Three new genera and 12 new species are described.

ANNULATES.

SMITH, FRANK. North American earthworms of the family Lumbricidae in the collections of the United States National Museum.

Proc. U. S. Nat. Mus., 52, No. 2174, Feb. 8, 1917, pp. 157–182.

Critical analysis of the family with special reference to the internal anatomy of the species considered. *Helodrilus welchi* is described as new.

TREADWELL, AARON L. A new species of polychaetous annelid from Panama, with notes on an Hawaiian form.

Proc. U. S. Nat. Mus., 52, No. 2186, Feb. 8, 1917, pp. 427–430, figs. 1–5.

Additional information on an Hawaiian annelid, *Leodice dubia* Woodward; describes as new, *Phyllodoce panamensis*, a species collected in Panama.

ECHINODERMS.

CLARK, AUSTIN H. One new starfish and five new brittle stars from Galapagos Islands.

Ann. Mag. Nat. Hist., 8th ser., 18, July, 1916, pp. 115–122.

Describes as new the starfish *Freyella scalaris*, and the following species of Ophiurans: *Astrodendrum galapagensis*, *Ophiacantha syrena*, *O. similis*, *Ophiolebes mortenseni*, *Ophiophyllum marginatum*. The types are in the U. S. National Museum.

——— A new brittle-star of the genus Ophiomitra from southern Japan.

Proc. Biol. Soc. Washington, 29, Dec. 16, 1916, pp. 225, 226.

Describes *Ophiomitra matsumotoi*, the type specimen of which is in the U. S. National Museum.

——— A new starfish from the Magellanic region.

Proc. Biol. Soc. Washington, 30, Jan. 22, 1917, p. 7.

Describes *Odontaster propinquus*, which represents a type not hitherto known from the Magellanic portion of the subantarctic belt. The type specimen is in the U. S. National Museum.

——— Two new Ophiurans from the China Sea.

Proc. Biol. Soc. Washington, 30, Jan. 22, 1917, pp. 13–16.

Describes *Ophiopteron alatum* and *Ctenamphiura sinensis*, the types of which are in the U. S. National Museum.

——— A revision of the crinoid family Antedonidae, with the diagnoses of nine new genera.

CLARK, AUSTIN H.—Continued.

Journ. Washington Acad. Sci., 7, No. 5, Mar. 4, 1917, pp. 127–131.

Classifies its 40 genera in 7 subfamilies, and describes 7 genera and 1 species as new. Based in part on the crinoid collections of the U. S. National Museum.

——— A revision of the recent genera of the crinoid family Bourgueticrinidae, with the description of a new genus.

Journ. Washington Acad. Sci., 7, No. 12, June 19, 1917, pp. 388–392.

Describes 1 new genus, *Monachocrinus*, and 1 new species, *M. serradiatus*, the type specimen of which is in the U. S. National Museum.

FISHER, WALTER K. New starfishes from the Philippines and Celebes.

Proc. Biol. Soc. Washington, 30, May 23, 1917, pp. 89–94.

Describes 13 new species, the type specimens of which are in the U. S. National Museum, except that of *Bunaster lithodes* which is based upon a specimen in the Museum of Comparative Zoölogy.

——— Trophodiscus, a new sea star from Kamchatka.

Proc. U. S. Nat. Mus., 52, No. 2180, Mar. 7, 1917, pp. 367–371, pls. 28–30.

Describes a new genus and species of starfish of the family Astropectinidae, as *Trophodiscus*, and *T. almus*. The type is in the U. S. National Museum.

TROCHELMINTHES.

HARRING, HARRY K. A revision of the rotatorian genera Lepadella and Lophocharis with descriptions of 5 new species.

Proc. U. S. Nat. Mus., 51, No. 2164, Dec. 21, 1916, pp. 527–568, pls. 89–97.

The types of the new species are in the U. S. National Museum.

MYERS, FRANK J. Rotatoria of Los Angeles, California, and vicinity, with descriptions of a new species.

Proc. U. S. Nat. Mus., 52, No. 2190, Feb. 23, 1917, pp. 473–478, pls. 40, 41.

A list of the species of rotifers collected by the author in Los Angeles and vicinity, with descriptions of 1 new species, *Lecane aspasia*.

PROTOZOANS.

CRAWLEY, HOWARD. The zoological position of the Sarcosporidia.

Proc. Acad. Nat. Sci. Phila., 68, No. 3, Aug. 30, 1916, pp. 379–388.

CUSHMAN, JOSEPH A. New species and varieties of Foraminifera from the Philippines and adjacent waters.

Proc. U. S. Nat. Mus., 51, No. 2172, Jan. 15, 1917, pp. 651–662.

Brief preliminary description of 29 new species and 23 new subspecies of Foraminifera dredged by the U. S. Bureau of Fisheries Steamer *Albatross* on the Philippine expedition 1907–1910. The types are in the U. S. National Museum.

——— A monograph of the Foraminifera of the North Pacific Ocean. Part VI. Miliolidae.

CUSHMAN, JOSEPH A.—Continued.

Bull. U. S. Nat. Mus., No. 71, June 15, 1917, pp. 1–108, pls. 1–39, figs. 1–52.

This sixth and last part of the work on the North Pacific Foraminifera presents a critical diagnosis of the single family Miliolidae, giving a detailed analysis of the phylogenetic development and describing 13 species and 2 subspecies as new. The types and additional material on which this work is based are in the U. S. National Museum.

STILES, CHARLES WARDELL. Treponema pallidum and Spirochaeta pallida from the standpoint of the international rules of zoological nomenclature.

Journ. Amer. Med. Assoc., 68, No. 1, Jan. 6, 1917, pp. 57–59.

NEMATHELMINTHES.

HALL, MAURICE C. (See under Brayton H. Ransom.)

RANSOM, BRAYTON H. The occurrence in the United States of certain nematodes of ruminants transmissible to man.

New Orleans Med. & Surg. Journ., 69, No. 4, Oct., 1916, pp. 294–298.

Read at the thirteenth annual meeting of the American Society of Tropical Medicine, Washington, D. C., May 9–11.

——— and MAURICE C. HALL. A further note on the life history of Gongylonema scutatum.

Journ. Parasitol., Urbana, Ill., 3, No. 4, June, 1917, pp. 177–181.

STILES, CHARLES WARDELL. Pork and trichinae. The need for the thorough cooking of fresh pork before it is eaten.

U. S. Pub. Health Serv., Pub. Health Rep., 31, No. 27, July 7, 1916, pp. 1747, 1748.

STILES, CHARLES WARDELL. Trichinae in pork and nematodes in butterfish, in their relation to the implied warranty in the sale of articles of food.

Journ. Amer. Med. Assoc., 68, No. 9, Mar. 3, 1917, pp. 685–687.

——— Implied warranty in the sale of food: a zoological view of "diseased" meats.

Journ. Amer. Med. Assoc., 68, No. 9, Mar. 3, 1917, p. 718.

Summary of foregoing article.

——— Certain military aspects of hookworm disease.

U. S. Pub. Health Serv., Pub. Health Rep., 32, No. 33, Aug. 17, 1917, pp. 1299–1301.

——— An experiment from the standpoint of applied zoology in medical inspection of school children as basis for an intensive health campaign.

Charlotte Med. Journ., 76, No. 1, July, 1917, pp. 21–27.

Mitchell lecture of the College of Surgeons, Philadelphia, Pa.

GENERAL PARASITOLOGY.

RANSOM, BRAYTON H. The animal parasites of cattle.

U. S. Dept. Agric., Bur. Animal Industry, Special Rep. Diseases of Cattle, rev. ed., Aug. 31, 1916, pp. 510–536, figs. 6–29.

RANSOM, BRAYTON H. Notes of spurious parasitism.

Journ. Parasitol., Urbana, Ill., 2, No. 4, June, 1917, pp. 197, 198.

Abstract of paper read before the twenty-ninth meeting of the Helminthological Society of Washington, Jan. 28, 1917.

BOTANY.

CHASE, AGNES. Rev. E. J. Hill.

Rhodora, 19, No. 220, Apr. 17, 1917, pp. 61–69, portrait.

——— List of writings on bryophytes by Rev. E. J. Hill.

Bryologist, 20, No. 3, May 26, 1917, p. 41.

CHRISTENSEN, CARL. Maxonia, a new genus of tropical American ferns.

Smithsonian Misc. Colls., 66, No. 9, Sept. 30, 1916, pp. 1–4.

The type and sole species of the new genus is a rather rare West Indian fern first described by Swartz, as *Dicksonia apiifolia*. It is somewhat intermediate between *Dryopteris* and *Polybotrya*.

COOK, O. F. The Mascarene cabbage palm as a new genus.

Journ. Washington Acad. Sci., 7, No. 5, Mar. 4, 1917, pp. 121–127.

Describes the new genus *Linoma*.

COVILLE, FREDERICK V. The wild blueberry tamed.

National Geographic Mag., 29, No. 6, July, 1916, pp. 535–546, illustrated.

HITCHCOCK, A. S. The scope and relations of taxonomic botany.

Science (n. s.), 43, No. 1106, Mar. 10, 1916, pp. 331–342.

——— Taxonomic botany and the Washington botanist.

Journ. Washington Acad. Sci., 7, No. 9, May 4, 1917, pp. 251–263.

HOWE, MARSHALL A., and WILLIAM DANA HOYT. Notes on some marine algae from the vicinity of Beaufort, N. C.

Memoirs New York Bot. Garden, 6, Aug. 31, 1916, pp. 105–123, pls. 11–15.

MAXON, WILLIAM R. Notes on American Ferns—X.

Amer. Fern Journ., 6, No. 3, Sept. 26, 1916, pp. 65–68.

PENNELL, FRANCIS W. Notes on plants of the southern United States—II.

Bull. Torrey Bot. Club, 43, No. 8, Aug. 22, 1916, pp. 407–421.

PITTIER, H. Preliminary revision of the genus Inga.

Contr. U. S. Nat. Herb., 18, pt. 5, Oct. 30, 1916, pp. 173–223, pls. 81–105.

ROSE, J. N. Pachyphytum longifolium.

Addisonia, 1, No. 1, Mar. 31, 1916, p. 7, pl. 4.

Redescribes and figures this species of central Mexico.

——— Echeveria setosa.

Addisonia, 1, No. 1, Mar. 31, 1916, p. 11, pl. 6.

Redescribes and figures this peculiar Mexican species.

——— Echeveria carnicolor.

Addisonia, 1, No. 2, June 30, 1916, p. 25, pl. 13.

Redescription and illustration, based on specimens from Vera Cruz.

——— Cremnophila nutans.

Addisonia, 1, No. 3, Sept. 30, 1916, p. 49, pl. 25.

ROSE, J. N.—Continued.

Redescribes and illustrates this crassulaceous plant, a native of Mexico.

——— Sedum diversifolium.

Addisonia, 1, No. 4, Dec. 30, 1916, p. 61, pl. 31 A.

Redescribes and illustrates this Mexican species.

——— Sedum humifusum.

Addisonia, 1, No. 4, Dec. 30, 1916, p. 61, pl. 31 B.

Redescribes and illustrates this species, a native of central Mexico.

——— Werckleocereus glaber.

Addisonia, 2, No. 1, Mar. 31, 1917, p. 13, pl. 47.

Redescribes and figures this epiphytic cactus, a native of Guatemala.

——— Dudleya brandegei.

Addisonia, 2, No. 1, Mar. 31, 1917, p. 15, pl. 48.

Redescribes and figures this Lower California plant.

——— Echeveria multicaulis.

Addisonia, 2, No. 2, June 30, 1917, p. 23, pl. 52.

——— Sedum bourgaei.

Addisonia, 2, No. 2, June 30, 1917, p. 33, pl. 57.

——— and PAUL C. STANDLEY. [Porophyllum cedrense and Porophyllum porfyreum, new species.]

North Amer. Flora, 34, pt. 3, Dec. 29, 1916, pp. 189–191.

ROSEN, HARRY R. The development of the Phylloxera vastatrix leaf gall.

Amer. Journ. Bot., 3, No. 7, July, 1916, pp. 337–360, pls. 14, 15, figs. 1–5.

STANDLEY, PAUL C. Additional notes upon New Mexican Hepaticæ.

Bryologist, 19, No. 4, July, 1916, pp. 64, 65.

——— Ammocodon, a new genus of Allioniaceae, from the southwestern United States.

Journ. Washington Acad. Sci., 6, No. 18, Nov. 4, 1916, pp. 629–631.

STANDLEY, PAUL C. Chenopodiales.

North Amer. Flora, 21, pt. 1, Nov. 27, 1916, pp. 1, 2.

——— Chenopodiaceae [of North America].

North Amer. Flora, 21, pt. 1, Nov. 27, 1916, pp. 3–93.

——— The Mexican and Central American species of Ficus.

Contr. U. S. Nat. Herb., 20, pt. 1, May 31, 1917, pp. 1–35.

——— Amaranthaceae [of North America].

North Amer. Flora, 21, pt. 2, June 9, 1917, pp. 95–169.

——— New East African plants.

Smithsonian Misc. Colls., 68, No. 5, June 23, 1917, pp. 1–20.

Includes description of 20 new species obtained by the Smithsonian African Expedition of 1909–1910.

——— (See also under J. N. Rose.)

SWINGLE, W. T. Pleiospermium, a new genus related to Citrus, from India, Ceylon, and Java.

Journ. Washington Acad. Sci., 6, No. 13, July 19, 1916, pp. 426–431.

——— The early European history and the botanical name of the Tree of Heaven, Ailanthus altissima.

Journ. Washington Acad. Sci., 6, No. 14, Aug. 19, 1916, pp. 490–498.

——— Severinia buxifolia, a Citrus relative native to southern China.

Journ. Washington Acad. Sci., 6, No. 19, Nov. 19, 1916, pp. 651–658, figs. 1, 2.

WILLIAMS, R. S. Peruvian mosses.

Bull. Torrey Bot. Club, 43, No. 6, June 29, 1916, pp. 323–334, pls. 17–20.

Based largely on material in the U. S. National Herbarium, collected in Peru in 1915 by O. F. Cook and G. B. Gilbert.

GEOLOGY AND MINERALOGY.

BROWN, GLENN V. Composition of the Selensulphur from Hawaii.

Amer. Journ. Sci., 42, Art. 15, Aug., 1916, pp. 132–134.

——— The composition of Thaumasite from Great Notch, New Jersey.

Amer. Mineralogist, 1, Nov., 1916, p. 81.

——— (See also under Edgar T. Wherry.)

GLENN, MILTIADES L. (See under Edgar T. Wherry.)

LARSEN, ESPER S., and EDGAR T. WHERRY. Halloysite from Colorado.

Journ. Washington Acad. Sci., 7, No. 7, Apr. 4, 1917, pp. 178–180.

A chemical and optical description of a specimen of halloysite collected by the senior author, and transmitted to the Museum.

——— ——— Leverrierite from Colorado.

Journ. Washington Acad. Sci., 7, No. 8, Apr. 19, 1917, pp. 208–217.

A detailed description of a peculiar mineral collected by the senior author, which proved to be a kind of leverrierite, and a discussion of the properties and relationships of that species.

——— (See also under Edgar T. Wherry.)

MERRILL, GEORGE P. A recently found iron meteorite from Cookeville, Putnam County, Tennessee.

Proc. U. S. Nat. Mus., 51, No. 2153, Nov. 24, 1916, pp. 325, 326, pl. 28.

Describes somewhat briefly a mass of badly oxidized meteoric iron found near Cookeville several years ago, but concerning the fall of which nothing is known. A chemical analysis is given.

——— Notes on the Whitfield County, Georgia, meteoric irons, with new analyses.

Proc. U. S. Nat. Mus., 51, No. 2157, Dec. 16, 1916, pp. 447–449, pl. 78.

MERRILL, GEORGE P.—Continued.

Description accompanied by chemical analyses of a 117 pound mass of meteoric iron belonging to the Shepard collection. Incidentally it is conclusively shown that this mass belongs to an entirely distinct fall from that described by W. E. Hidden from Whitfield County, with which it had become confounded. It is shown further that both are distinct from the Cleveland, East Tennessee, iron described by Kunz.

——— A newly found meteoric stone from Lake Okechobee, Florida.

Proc. U. S. Nat. Mus., 51, No. 2163, Dec. 21, 1916, pp. 525, 526.

Briefly describes a fragment weighing about 1,100 grams of meteoric stone which is interesting mainly from its history, it having been brought up in a seine by a man engaged in fishing in Lake Okechobee. Nothing is known of its fall. The stone has the further distinction of being the first meteorite reported from the State of Florida.

——— A new find of meteoric stones near Plainview, Hale County, Texas.

Proc. U. S. Nat. Mus., 52, No. 2184, Mar. 7, 1917, pp. 419–422, pls. 34, 35.

This paper, as begun, was supposed to be dealing with a find of four meteoric stones near Plainview, in Hale County, Tex. Before the paper was finally issued, five more individuals of the same fall were found, rendering an addendum necessary. Since its publication, the writer has heard of three more from the same locality, making a total of twelve, weighing altogether upward of about 31 kilograms. The principal interest attached to the stone lies in its variable character, as shown by slides from different portions, a difference which it is felt can best be accounted for on the assumption that it is a breccia, or agglomerate composed of two stones, one an intermediate and the other a spherical chondrite.

MERRILL, GEORGE P. On the calcium phosphate in meteoric stones.

Amer. Journ. Sci., 43, Apr., 1917, pp. 322–324, 1 fig.

A brief review and continuation of matter previously published under the caption of "On the monticellite-like mineral in meteorites." It aims to show an almost universal occurrence in meteoric stones of a calcium phosphate in a form other than that of apatite, and which it is proposed should be referred to the varietal form francolite.

WHERRY, EDGAR T. Glauberite crystal-cavities in the Triassic rocks of eastern Pennsylvania.

Amer. Mineralogist, 1, No. 3, Sept., 1916, pp. 37–43, pl. 3, 1 fig.

A description of specimens of these cavities in the Museum collection, with an account of the method of identifying the mineral represented and a discussion of the origin of the material.

——— Notes on alunite, psilomelanite, and titanite.

Proc. U. S. Nat. Mus., 51, No. 2145, Oct. 16, 1916, pp. 81–88.

A mineralogical and chemical description of two specimens of alunite, one of psilomelanite, and one of titanite.

——— A chemical study of the habitat of the walking fern, Camptosorus rhizophyllus (L.) Link.

Journ. Washington Acad. Sci., 6, No. 20, Dec. 4, 1916, pp. 672–679.

An account of the results of chemical investigation of the soils in which this plant grows.

——— Neodymium as the cause of the red-violet color in certain minerals.

Journ. Washington Acad. Sci., 7, No. 6, Mar. 19, 1917, pp. 143–146.

It is shown that the rare element neodymium is the cause of the color of certain types of calcite and apatite.

WHERRY, EDGAR T. A tetragonal iron phosphide from the Ruff's Mountain meteorite.

Amer. Mineralogist, 2, No. 6, June, 1917, pp. 80, 81.

A crystallographic description of minute distorted crystals obtained by Dr. G. P. Merrill in the course of investigation of this meteorite.

——— A remarkable occurrence of calcite in silicified wood.

Proc. U. S. Nat. Mus., 53, No. 2200, June 1, 1917, pp. 227–230, pls. 29–31.

A description of a specimen showing a number of unusual features.

——— and GLENN V. BROWN. An American occurrence of miloschite.

Amer. Mineralogist, 1, No. 4, Oct., 1916, pp. 63–67.

A mineralogical and chemical description of a specimen which was submitted to the Museum for report, and proved to represent the rare mineral miloschite.

——— and MILTIADES L. GLENN. Chalcedony mistaken for an iron sulfate mineral.

Amer. Mineralogist, 2, No. 1, Jan., 1917, pp. 6, 7.

A description of two specimens in the Museum collection which had been labeled as an iron sulfate mineral, but which proved on analysis to be impure chalcedony.

——— and ESPER S. LARSEN. The indices of refraction of analyzed rhodochrosite and siderite.

Journ. Washington Acad. Sci., 7, No. 12, June 19, 1917, pp. 365–368.

A presentation of the results of optical study of material in the Museum collection which had been analyzed.

——— (See also under Esper S. Larsen.)

PALEONTOLOGY.

BASSLER, RAY S. (See under Ferdinand Canu.)

BERRY, EDWARD WILBER. The flora of the Citronelle formation.

Prof. Paper, U. S. Geol. Surv., 98–L, Sept. 11, 1916, pp. 193–208, pls. 44–47.

Describes 18 species of plants from the Citronelle formation, thought to belong to the latter half of the Pliocene epoch. These plants, many of which are new to science, are presumed to be directly ancestral to the Pleistocene and Recent floras of the same region.

CANU, FERDINAND, and RAY S. BASSLER. A synopsis of American early Tertiary Cheilostome Bryozoa.

Bull. U. S. Nat. Mus., No. 96, Feb. 27, 1917, pp. 1–87, pls. 1–6.

The classification of this group of Bryozoa, and the principles upon which it is based, are presented in this bulletin, which is introductory to a monograph on the subject. Fifty new genera and 42 new species are described and illustrated.

COCKERELL, T. D. A. Some American fossil insects.

Proc. U. S. Nat. Mus., 51, No. 2146, Oct. 16, 1916, pp. 89–106, pl. 2, figs. 1–9.

Describes and illustrates new and known species of fossil insects ranging from the Coal Measures to the Miocene. Founds the new genera *Protepacmus*, *Pachysomites*, and *Aulacites*, based on Miocene insects, and *Danielsiella* from the Coal Measures.

——New Tertiary insects.

Proc. U. S. Nat. Mus., 52, No. 2181, Feb. 23, 1917, pp. 373–384, pl. 31.

Describes and illustrates 5 new genera and 19 species of fossil insects from the Eocene, Oligocene, and Miocene rocks of the United States and Great Britain, distributed as follows: 4 new genera and 15 species of Diptera; 1 species of Thysanoptera; 1 species of Neuroptera; 1 new genus and 2 species of Hymenoptera.

COCKERELL, T. D. A.—Continued.

——— Some fossil insects from Florissant, Colorado.

Proc. U. S. Nat. Mus., 53, No. 2210, June 2, 1917, pp. 389–392.

Describes 3 new species of Hymenoptera and 2 Diptera.

DALL, WILLIAM HEALEY. A contribution to the invertebrate fauna of the Oligocene beds of Flint River, Georgia.

Proc. U. S. Nat. Mus., 51, No. 2162, Dec. 21, 1916, pp. 487–524, pls. 83–88.

Discusses, describes and illustrates the molluscan fauna of the region, and shows, in tabular form, the distribution of the species. Of the forms described, 36 are new.

EASTMAN, CHARLES R. Fossil fishes in the collection of the United States National Museum.

Proc. U. S. Nat. Mus., 52, No. 2177, Feb. 24, 1917, pp. 235–304, pls. 1–23, figs. 1–9.

A systematic study of the entire collection of fossil fishes in the U. S. National Museum. The author describes 10 new species and founds 1 new genus and 1 new family.

GIDLEY, JAMES WILLIAMS. Notice of a new Paleocene mammal, a possible relative of the Titanotheres.

Proc. U. S. Nat. Mus., 52, No. 2187, Feb. 23, 1917, pp. 431–435, pl. 36, 1 fig.

The author describes a new genus and species of an ungulate mammal, founded on a few lower teeth and fragment of the lower jaw, from the Fort Union formation, near Buford, N. Dak. The possible relation of this new form to the Titanotheres of the Eocene and Oligocene is suggested; comparison

GIDLEY, JAMES WILLIAMS—Continued.

with the Amblypoda is made but the author concludes that it cannot be classed with these forms, and that the relationship may be proven so remote, by future discoveries, as to necessitate the establishment of a new family for its reception.

GILMORE, CHARLES W. The fossil turtles of the Uinta formation.

Memoirs Carnegie Museum, 7, No. 2, Nov., 1916, pp. 101–161, pls. 18–27, figs. 1–22.

A brief discussion of their geological occurrence is followed by a systematic description of the species, 10 of which are new. The paper is based on material in the collection of the Carnegie Museum, but National Museum specimens were largely used for purposes of comparison.

——— Contributions to the geology and paleontology of San Juan County, New Mexico. 2. Vertebrate faunas of the Ojo Alamo, Kirtland and Fruitland formations.

Prof. Paper, U. S. Geol. Surv., 98–Q, Dec. 19, 1916, pp. 279–308, pls. 64, 72–78, figs. 28–42.

A compilation of all obtainable information relating to the extinct vertebrate faunas of the Ojo Alamo, Kirtland and Fruitland formations. Two new species of fossil turtles are described.

——— Brachyceratops, a Ceratopsian dinosaur from the Two Medicine formation of Montana, with notes on associated fossil reptiles.

Prof. Paper, U. S. Geol. Surv., 103, 1917, pp. i–v, 1–45, pls. 1–4, figs. 1–57.

This paper contains a discussion of the faunas of the Two Medicine and related formations, followed by a detailed description of the skeletal anatomy of the Ceratopsian genus *Brachyceratops*. In conclusion the relationships of the genus are discussed and brief mention is made of other members of the fauna. Illustrations of both the articulated skeleton and a life restoration are given.

HAY, OLIVER P. Descriptions of two extinct mammals of the order Xenarthra from the Pleistocene of Texas.

Proc. U. S. Nat. Mus., 51, No. 2147, Oct. 28, 1916, pp. 107–123, pls. 3–7.

The author here describes some good material of a glyptodont from the Pleistocene deposits near Wolfe City, Hunt County, Tex., referring it to Cope's species *Glyptodon petaliferous*, founded on one half of a single dermal plate. He also describes a new species of edentate, *Nothrotherium texanum*, founding it on a good skull from Wheeler County, Tex.; comparisons are made with *N. escoriacense* Reinhardt, *N. gracilicaps* Stock, and *Cholocpus hoffmanni*, and the morphology, especially of the bullae, is discussed.

——— Descriptions of some fossil vertebrates found in Texas.

Bull. Univ. Texas, No. 71, Dec. 20, 1916, pp. 1–24, pls. 1–4.

Describes and figures new and old species of vertebrates from Texas. The specimens are distributed in various collections, including that of the U. S. National Museum.

——— Description of a new species of mastodon, Gomphotherium elegans, from the Pleistocene of Kansas.

Proc. U. S. Nat. Mus., 53, No. 2198, June 1, 1917, pp. 219–221, pl. 26.

This short paper describes a new species of mastodon, founded on a last lower molar tooth. The author compares this tooth with corresponding ones of Pliocene species, and concludes that the type of his new species gives evidence that the bunolophodont mastodons continued on into the Pleistocene. He describes a second tooth, which he refers to the same species. The type specimen is the property of the U. S. National Museum.

——— Description of a new species of extinct horse, Equus lambei, from the Pleistocene of Yukon Territory.

HAY, OLIVER P.—Continued.

Proc. U. S. Nat. Mus., 53, No. 2212, June 5, 1917, pp. 435–443, pls. 56–58.

Describes a new species of horse, founded on a nearly complete skull, with lower jaw associated. Comparisons are made with several other described species of Pleistocene horses, and five tables of comparative measurements are given.

KNOWLTON, F. H. A review of the fossil plants in the United States National Museum from the Florissant lake beds at Florissant, Colorado, with descriptions of new species and list of type-specimens.

Proc. U. S. Nat. Mus., 51, No. 2151, Nov. 24, 1916, pp. 241–297, pls. 12–27.

Describes 2 new genera, 20 new species and varieties, and over 80 previously known species. The list of type specimens shows that the National Museum contains about 120 of the 253 nominal species of plants from Florissant.

——— A Lower Jurassic flora from the Upper Matanuska Valley, Alaska.

Proc. U. S. Nat. Mus., 51, No. 2158, Dec. 16, 1916, pp. 451–460, pls. 79–82.

This is believed to be the oldest Jurassic flora certainly known in North America, and embraces only 10 species. Several were not before known to be present in the new world.

——— Contributions to the geology and paleontology of San Juan County, New Mexico. 4. Flora of the Fruitland and Kirtland formations.

Prof. Paper, U. S. Geol. Surv., 98–S, Dec. 18, 1916, pp. 327–353, pls. 84–91.

This paper enumerates 40 species of plants, 16 of which are new to science. The age of the beds, previously thought to be Laramie, is here shown to be Upper Montana.

MANSFIELD, WENDELL C. Mollusks from the type locality of the Choctawhatchee marl.

Proc. U. S. Nat. Mus., 51, No. 2169, Dec. 21, 1916, pp. 599–607, pl. 113.

Discusses the stratigraphy and faunal characteristics of this formation, and describes and illustrates 4 new species and 1 new sub-species.

RATHBUN, MARY J. New species of South Dakota Cretaceous crabs.

Proc. U. S. Nat. Mus., 52, No. 2182, Feb. 23, 1917, pp. 385–391, pls. 32, 33.

Three new forms are described from the Dakota shales. One, *Dakoticancer overana*, occurs in great abundance; it belongs to the subtribe Dromiacea, and for it a new genus, family, and superfamily (Dakoticancroideae) are constructed. A second species, *Homolopsis punctata*, belongs to the allied superfamily Homoloidea; while the third species, *Campylostoma pierrense*, is one of the subtribe Oxystomata.

STANTON, T. W. Contributions to the geology and paleontology of San Juan County, New Mexico. 3. Nonmarine Cretaceous invertebrates of the San Juan Basin.

Prof. Paper, U. S. Geol. Surv., 98–R, Dec. 6, 1916, pp. 309–326, pls. 79–83.

A fauna of 27 forms of nonmarine Cretaceous fossils is described and illustrated, preceded by a general introduction and a table showing the stratigraphic range of the fauna.

STEPHENSON, LLOYD WILLIAM. North American Upper Cretaceous corals of the genus Micrabacia.

Prof. Paper, U. S. Geol. Surv., 98–J, Aug. 10, 1916, pp. 115–131, pls. 20–23.

Gives descriptions and illustrations of 10 species and varieties of the genus of fossil corals, with a key to the genus and an introduction discussing its stratigraphic occurrence.

VAUGHAN, THOMAS WAYLAND. The reef-coral fauna of Carrizo Creek, Imperial County, California, and its significance.

Prof. Paper, U. S. Geol. Surv., 98-T, Mar. 3, 1917, pp. 355-395, pls. 92-102, figs. 43-46.

The author illustrates by sketch maps the geographic and geologic relations and the geologic history of this region, and discusses the significance of the coral fauna. This is followed by a systematic discussion of the fauna. Nine new species and varieties are described and illustrated.

WALCOTT, CHARLES D. Cambrian geology and paleontology. III. No. 5. Cambrian trilobites.

Smithsonian Misc. Colls., 64, No. 5, Sept. 29, 1916, pp. 303-456, pls. 45-67.

This is the largest single bulletin yet published by the author in the Smithsonian Miscellaneous Collections, and the third of the series on Cambrian geology and paleontology to bear the title "Cambrian trilobites." Founds 4 new genera and 4 new subgenera, describes and figures 54 new species, 29 previously described, and 6 undetermined. Proposes and defines a new formation name, Chisholm shales.

——— Cambrian geology and paleontology. IV. No. 1. Nomenclature of some Cambrian Cordilleran formations.

Smithsonian Misc. Colls., 67, No. 1, May 9, 1917, pp. 1-8.

The second title on this subject, the first having appeared in 1908. Proposes and defines new formation names and their sections as follows: Ptarmigan formation and Gordon shale; also further information about Fort Mountain formation, Eldorado formation, and Chisholm shale.

WALCOTT, CHARLES D. Cambrian geology and paleontology. IV. No. 2. The Albertella fauna in British Columbia and Montana.

Smithsonian Misc. Colls., 67, No. 2, May 9, 1917, pp. 9-59, pls. 1-7.

Discusses and correlates all published information on this fauna, and adds new data from observations in the field and collections made in 1916. Lists 40 different species of this fauna, including 16 new and 4 undetermined. Describes and figures 28 species, including new forms. This fauna includes trilobites, brachiopods, spicules of cystids, tubes of *Hyolithes*, and other forms, many of them well preserved.

WHERRY, EDGAR T. Two new fossil plants from the Triassic of Pennsylvania.

Proc. U. S. Nat. Mus., 51, No. 2154, Nov. 24, 1916, pp. 327-329, pls. 29, 30.

Descriptions of a new conifer and of a plant of unknown affinity.

WICKHAM, H. F. New species of fossil beetles from Florissant, Colorado.

Proc. U. S. Nat. Mus., 52, No. 2189, Feb. 23, 1917, pp. 463-472, pls. 37-39.

Describes and illustrates 14 new species and the new genus *Brachyspathus*.

WILLIAMS, HENRY SHALER. New brachiopods of the genus Spirifer from the Silurian of Maine.

Proc. U. S. Nat. Mus., 51, No. 2144, Dec. 16, 1916, pp. 73-80, pl. 1.

Describes and illustrates in detail new Silurian species of the genus *Spirifer*, and discusses their relation to similar species from the Silurian of Great Britain.

MINERAL TECHNOLOGY.

MITMAN, CARL W. A new Portland cement plant in Washington, D. C.

Cement World, 10, No. 4, July, 1916, pp. 55, 56, with illustration.

TEXTILES.

LEWTON, FREDERICK L. The installation of textile fabrics.

Proc. Amer. Assoc. Museums, 10, 1916, pp. 115–117.

Describes installation methods used in the division of textiles, U. S. National Museum, and points out that the types of installation needed in an industrial museum are essentially different from those in use in museums of ethnology or art.

MEDICINE.

LEWTON, FREDERICK L. The opportunity for developing historical pharmacy collections at the National Museum.

Journ. Amer. Pharmaceutical Assoc., 6, No. 3, Mar., 1917, pp. 259–262.

A paper read before the Washington Branch of the American Pharmaceutical Association, January 31, 1917, giving a brief history of the National Museum, the development of the medicinal collections and making a plea for the coöperation of the Pharmaceutical Association.

EXPLORATIONS AND FIELD WORK.

BARTSCH, PAUL. Visit to the Cerion colonies in Florida.

Smithsonian Misc. Colls., 66, No. 17, Apr. 27, 1917, pp. 41–44, with illustrations.

Brief account of this year's examination of the *Cerion* colonies planted on the Florida Keys.

——— (See also under John B. Henderson.)

HENDERSON, JOHN B. Dredging for marine invertebrates off the Florida Keys.

Smithsonian Misc. Colls., 66, No. 17, Apr. 27, 1917, p. 39, 1 illustration.

Brief account of dredging explorations on Pourtales Plateau. The material collected covers all groups of marine invertebrates, and is deposited in the U. S. National Museum.

——— and PAUL BARTSCH. Collecting in western Cuba.

Smithsonian Misc. Colls., 66, No. 17, Apr. 27, 1917, pp. 39–41.

Brief account of a month's explorations in the mountains of western Cuba by Messrs. Henderson and Bartsch to secure a representative series of land mollusks. The mollusks and other organisms secured are in the collections of the U. S. National Museum.

MARSHALL, WM. B., and J. A. MIRGUET. Study of the marine invertebrate fauna of Chesapeake Bay.

Smithsonian Misc. Colls., 66, No. 17, Apr. 27, 1917, p. 45.

Brief report of the continuation of the hydrographic and biologic study of Chesapeake Bay, begun by the U. S. Bureau of Fisheries in 1915. The marine invertebrates secured on the two cruises discussed are deposited in the U. S. National Museum.

Explorations and field-work of the Smithsonian Institution in 1916.

Smithsonian Misc. Colls., 66, No. 17, Apr. 27, 1917, pp. 1–134, figs. 1–128.

Covers the following expeditions, from the majority of which the Museum obtained material for its collections: Geological explorations in the Canadian Rockies; Geological

Explorations and field-work, etc.—Continued.

field studies; Hunting graptolites in the Appalachian Valley; Explorations in the Ohio Valley for fossil algae and coral reefs; Examination into the subject of supposedly ancient human remains at Vero, Florida; Trip to Fort Myers region, west coast of Florida; Expedition to Borneo and Celebes; Exploration in China; Explorations in Santo Domingo; Dredging for marine invertebrates off the Florida Keys; Collecting in western Cuba; Visit to the *Cerion* colonies in Florida; Study of the marine invertebrate fauna of Chesapeake Bay; Expedition to South Africa for living animals; Botanical exploration in Venezuela; Botanical explorations in Florida and New Mexico; Botanical explorations in the Hawaiian Islands; Archeological explorations in Guatemala and Honduras; Prehistoric remains in New Mexico, Colorado, and Utah; Anthropological work among the Sioux and Chippewa; Preliminary archaeological survey of La Pointe Island, Wisconsin; Archeological investigations in New Mexico; Archeological reconnoissance in western Utah; Study of Indian music; Ethnological researches in Oregon and Washington; Studies among the Indians of California; Work among the Osage Indians; Ethnology of the Iroquois; Ethnological work among the Sauk, Fox, and Peoria Indians; Researches by Dr. John R. Swanton; Visit to the Cherokee Indians; Solar radiation observations at Mount Wilson.

BIOGRAPHY.

DALL, WILLIAM HEALEY. George Kennan.

Outlook, 113, No. 12, July 19, 1916, pp. 675–677.

Biographical notice of a distinguished collaborator of the Museum.

——— Biographical memoir of Theodore Nicholas Gill, 1837–1914.

Nat. Acad. Sci. Biogr. Memoirs, 8, July, 1916, pp. 313–343, with portrait and bibliography.

Memoir of one of the most distinguished Associates of the National Museum.

HOLMES, WILLIAM H. In memoriam—Matilda Coxe Stevenson, James Stevenson.

Amer. Anthropologist (n. s.), 18, No. 4, Oct.–Dec., 1916, pp. 552–559, pl. 26.

HOLMES, WILLIAM H.—Continued.

The career of Mrs. Stevenson (Mrs. James Stevenson) is here outlined by one who had been associated with her during the many years of her able and energetic work among the tribes. She supplied a most important chapter in the history of the pueblos, a chapter which would have remained forever a practical blank save for her exhaustive researches. The high meed of praise here awarded her is thus fully deserved. Hardly less noteworthy as a contributor to our knowledge of the tribes and occupying besides a remarkable place in the opening up of the great West, especially in his connection with government explorations and surveys, is James Stevenson, who is appropriately mentioned here, although his death occurred in 1888.

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